Arts COMPANION,

Or a New

ASSISTANT

FOR THE

INGENIOUS.

In Three Parts.

PART I. Containing, The Art of Drawing in Perſpective made eaſy and fully explain'd; the Manner of Drawing with Crayons, and the beſt Receipts for making them of all Colours: The Way of painting on Glaſs; Inſtructions for Etching on Copper-Plate, and to caſt Amber in any Shape: With a new and curious Method of making the various Kinds of Varniſhes for Japanning upon Glaſs, Wood, or Metal; and to make gilt Japan-ware as beautiful and light as that bought from the Eaſt-Indies.

PART II. Containing the Art of Drawing and Painting in Water-Colours; with ſufficient Directions for delineating a View or Proſpect to the utmoſt Exactneſs, and for colouring the ſame or any other Print in the moſt beautiful Manner; Alſo Inſtructions for making tranſparent Colours of every Sort, and the Manner of taking off *Medals* inſtantly, by various Methods not before made publick, interſperſed with many curious Receipts for the Uſe of Painters, Statuaries, Founders, *&c.*

PART III. Containing the Art of Painting in Miniature; whereby the various Methods of Drawing are made eaſy to any tolerable Capacity: To which are added Directions for Shadowing, Stipling, *&c.* with many curious Receipts for preparing Colours peculiar to this Kind of Painting; likewiſe the Preparation of an excellent Poliſh and Shell: The whole taken from ſome of the beſt *Italians* and other Maſters.

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THE

PREFACE.

THE following Piece is deſigned for the Inſtruction and Entertainment of Gentlemen and Ladies, who chuſe to divert themſelves in the curious Arts of Drawing, Japanning, Painting upon Glaſs, Varniſhing upon Metal, Wood or Paſtboard, and of taking Views and Proſpects juſtly, according to the Rules of Perſpective.

The Author has taken Care to preſcribe ſhort and eaſy Directions for the ſpeedy attaining the Knowledge of theſe uſeful and amuſing Arts, without giving the Students the Trouble of conſulting large Volumes (which are generally taken from one another right or wrong) or of learning ſeveral Branches of the Mathematicks, as is generally thought neceſſary, in order to underſtand Perſpective; *a Science, without the Knowledge of which, it is impoſſible to make any great Improvement in the Arts of Drawing or Painting, or even to be a Judge of good Drawing, or to underſtand whether one is Right or Wrong, in what one would invent or deſign.*

I muſt confeſs, I owe my Knowledge of ſeveral valuable Receipts, to ſome Manuſcrips of the great Mr. Boyle, *which have never been printed; and have fallen into my Hands by Means of the ſame noble Lord, his Relation, whom I have mentioned in my* Art of Drawing, and Painting in Water-colours,

'I am likewiſe obliged to a worthy Gentleman, who, after a deliberate Study of Perſpective, ſet me to rights in a few Hours, when I was at any Loſs. As for the reſt, they are Obſervations from the Experiments which I have made

made from time to time, at a large Expence, and with great Induſtry.

I have been upbraided by ſome Workmen in Curioſities, for publiſhing Receipts of Value, to inſtruct the Gentry in the Manner of Drawing and Painting, and in Arts of the like kind; for, ſay they, it is a Damage to the Workmen who get their Livelihood by ſuch Things. I have a ſhort Anſwer to this Argument; namely, that there are none of the Receipts, which I publiſh, but what are either my own Invention, or I have bought at a good Price, or elſe have been preſented with by People of Faſhion, with their Deſire to have them made publick; and theſe are ſuch as would never come to the Knowledge of the Workmen, if I was not to communicate them in this Manner, by which they have an Opportunity of improving themſelves, as many of them have done, from Things that I have already publiſhed in the ſame way; ſo that I can ſay, from my own certain Knowledge, that many of them are obliged to me, and, inſtead of complaining, ought to thank me.

THE

THE METHOD OF LEARNING to DRAW IN PERSPECTIVE, &c.

CHAP I.

Short Rules for Drawing in Perſpective, *which will prove of great Uſe to all Deſigners.*

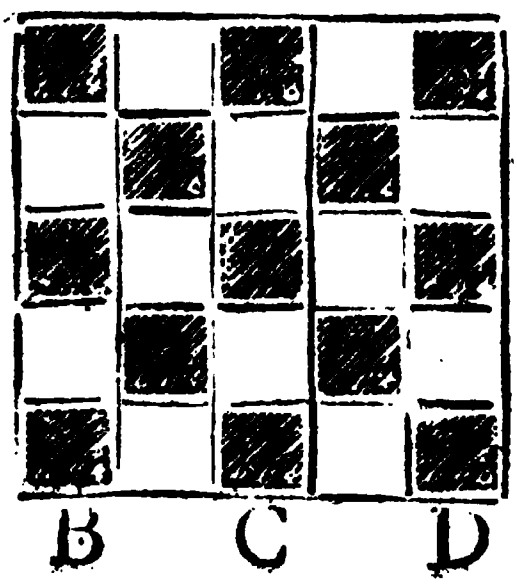
WHEN I obſerve the Faults daily committed in the Deſigning of Landſcapes, or drawing Views and Proſpects, I more and more find the Neceſſity of knowing a little Perſpective, to correct and avoid ſuch Errors; for, underſtanding that Art will render any one capable of drawing any Thing with mathematical Truth and Certainty.

But I conceive that the Reaſon, why ſo many Miſtakes are commonly made in Drawings, proceeds from the Apprehenſions that ſome have of the Length of time it will take up, to render themſelves Maſters of Perſpective, and from being frightned at the Difficulties they conceive are in that Study; particularly imagining, that one muſt be firſt well grounded in the Mathematicks:

This I know has discouraged many from engaging in the Rules relating to this Art; but for their Sakes I undertake, in this Tract, to instruct them in the following Lessons how to lay any Plan in Perspective, and raise Pillars or Buildings to due Heights according to their Distances.

Lesson I. *Of the* Plan.

FIG. I.



Suppose we have a square Piece of Pavement, as in Figure I, consisting of 25 Pieces of Marble, each a Foot square, it must be measured exactly, and laid regularly down upon Paper: You may likewise, for your better Observation, mark every other Stone or Marble black, which will better inform you how every particular Square will appear, when we have a true perspective View of them; or else you may number every one, and, when the following Lesson is done, number those in the perspective Plan, with the same Figures as are marked on the first Plan.

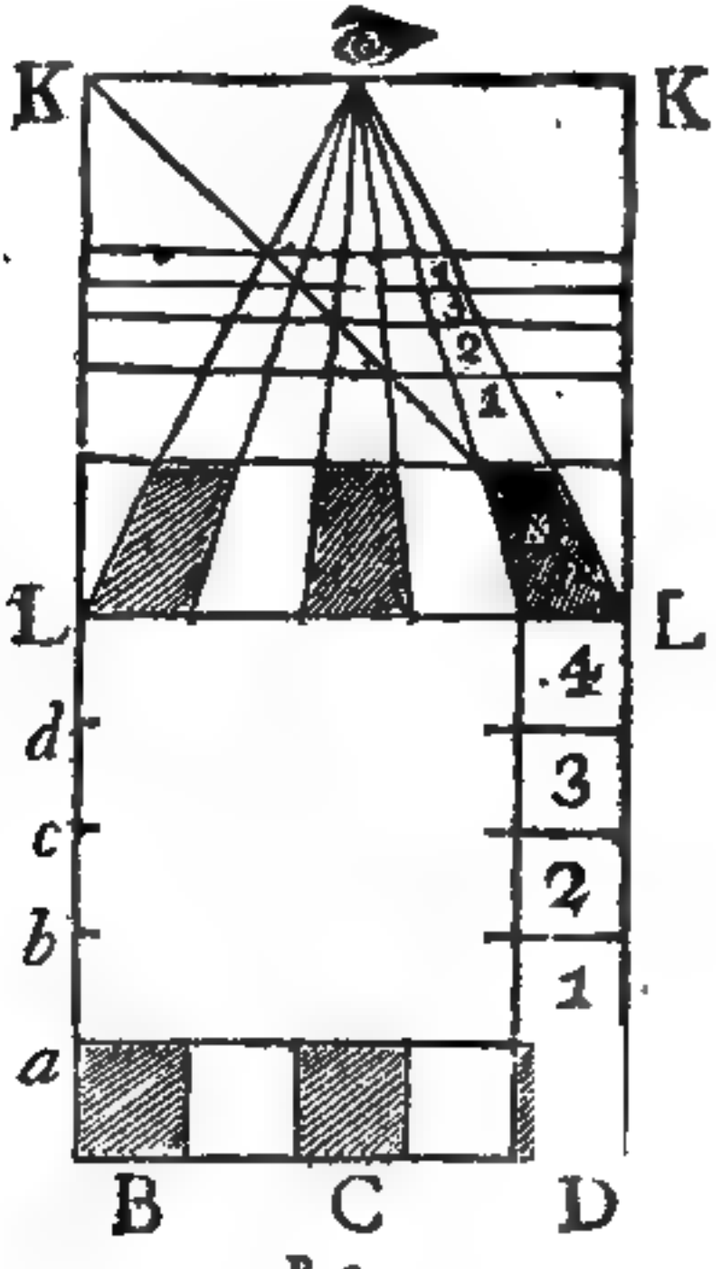
Lesson II. *Of laying Figure* I. *in Perspective,*

It is to be understood in Perspective that there are two Points to be considered; the first we call the Point of Sight,

Sight, that is, what relates to every Thing in our View from the Place where we ſtand; and it matters little where we ſtand to take our View, for the *Perſpective* will ſtill be true, according to the Appearance of the Plan to our Eye: If we ſtand at a Corner, or in the Middle, or at any Point, the Method I ſhall preſcribe preſently will lay our Plan juſtly before us as it will appear.

The other Point is called the Point of Diſtance, becauſe it governs the Diſtances, and the Proportions of every Thing we can truly ſee of the Plan, in whatever Poſition we happen to be.

FIG. II.



At A, you ſee the Plan of Figure I. This is divided into Squares, as mentioned in that Figure; the three at the Bottom, marked B, C, D, in both, and the Squares in the Plan A, marked 1, 2, 3, 4, are thoſe which are marked in perſpective with the ſame Numbers.

Now, to lay your Plan in perſpective, fix your Point of Sight as you obſerve in the Figure, or more or leſs to the right or left as you think proper; then draw the Line K, K, parallel to, and at what Diſtance you will *from*, the Line L, L: then raiſe a Line on each ſide from L to K, to form the Figure you ſee, as a Frame to your Picture; then draw a Line from the Corner K, which is the Point of Diſtance, to L, and this Line will regulate your Work.

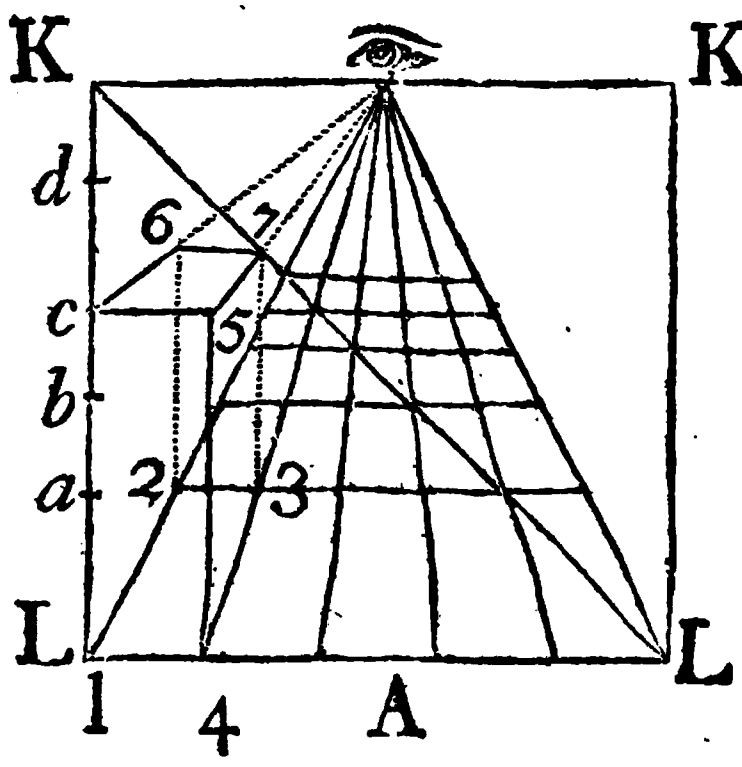
Then draw Lines, from the Squares of your Plan to the Point of Sight, as exactly as poſſible; and wherever your Line of Diſtance cuts thoſe Lines, which are drawn from the Squares of your Plan to the Point of Sight, that marks where your Squares in perſpective ought to be; then draw Lines parallel to the Line L, L, where the Line of Diſtance cuts, and that will give you the true Figure of every Square: So D, in the perſpective Plan, anſwers to D, in the meaſured Plan; and 1, 2, 3, 4, anſwers to the others in the ſame.

When you have done this, the next Rule you are to know is, how to raiſe either Pillars, Trees, Houſes, or any other Bodies, according to their reſpective Heights, at different Diſtances and Proportion, on the Plan you have laid down.

Leſſon III.

How to raiſe Pillars, or any Bodies of a certain Proportion, in Perſpective.

FIG. III.



You have now your Plan meaſured out, in perſpective, into Squares of a Foot; one of theſe Squares in this Leſſon ſerves for the Baſe, or Bottom, of a pillar a Foot thick. This Figure III. is exactly of the ſame Dimenſions of the Plan laid in perſpective at Figure II. Firſt mark the Line L, K, in equal Proportions, by the ſame Scale of the Ground plan, Figure II; as, *a*, *b*, *c*, *d*, which are ſo many Feet in height; and they, ſtanding on the Baſe of the firſt Figure, are Up-rights, not in perſpective: Then draw a Line parallel with L, 1, from Number 4, which gives you the Front of the Body you are to raiſe, and if it is to be only three Feet high, draw a Line croſs from C to the Line raiſed from No. 4; and that determines the Height, which you will then find to be a Foot wide, and three Feet high by Meaſure: Then

from the Top of the Line 4 draw a Line, with a Black-lead Pencil, to the Point of Sight, and raiſe another Line from 3 parallel to the Line 4, till it touches the pencil'd Line, paſſing from 5 to the Point of Sight, which gives you the Side-appearance of the Column, or Body, as you will ſee it from the Place where you ſtand. [The Line from point 3 ſhould be drawn with a Pen, becauſe it is to remain.] Then with a Pencil draw a Line from C to the point of Sight, which will determine the other Line, to make the Shape of the Top of the Column; and then raiſe a Line parallel with L, 1, with a Pencil, from the Point 2, till it touches the Line from C to the point of Sight; draw then a parallel Line to C, 5, at 6, 7, and you will have the Square of the Top of the Pillar, or Column, as you can obſerve it from the place where you ſtand, which I ſuppoſe to be at A. [You muſt remember, that the Line drawn from 2 to 6 is only an imaginary Line, to be rubbed out; for it cannot be ſeen from the place where you ſtand, and therefore muſt not appear in the Drawing; but you ſhould not leave it out, becauſe it ſhews you where to regulate the Top of your Column, and teaches you how to place your Column upon its Baſe with Certainty.] By this means you may ſee the Front and one Side of your Column: And the Line from 1 to 2 muſt alſo be rubbed out, becauſe it can't be ſeen.

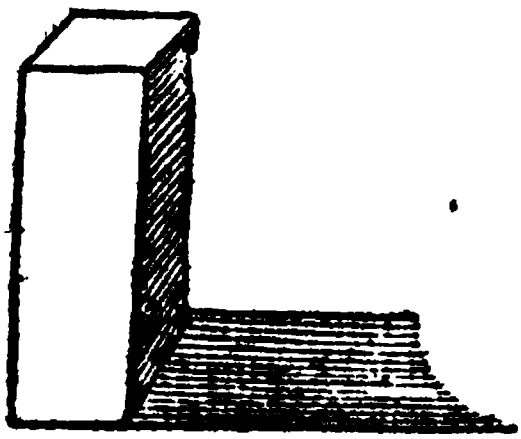
Then finiſh your Column only with the Lines

from 1 to C,	from C, to 5,
from 4 to 5,	from 6, to 7, and
from 3 to 7,	from 1 to 4;

and it will be drawn without any Imperfection, and appear as follows in Figure IV.

FIG.

FIG. IV.



When this is done, you may place another Column on any one of the Squares erected in the ſame Manner, obſerving to fling your Shades all on one Side, and then you cannot err: But eſpecially mind where the dotted Lines are in Figure III.

When you can maſter theſe few Leſſons, which you may gain with very little Pains, you will be capable of doing any Thing in this Way, that will be regular and certain, and know the Faults of the Ignorant and Unskilful.

CHAP. II.

Of Painting upon Glaſs.

PAINTING upon Glaſs is an Art which has generally appeared ſo difficult, that few have ſucceeded in the Attempt; and yet there is no Repreſentation of any portrait can appear more elegant, than in a picture done well in this Manner: For you have all the Softneſs and all the Tenderneſs that can be deſired in a picture, and it is eaſy too for any perſon to work upon, for there are no Out lines to draw, nor any Shades to make, but you put on the Colours without the Trouble of either.

The Pictures, which we uſe on this Occaſion, are thoſe done in Mezzo tinto, or what we call Mezzo tincto Prints, for their Shades are rubbed down with an Inſtrument on the Copper-plates; ſo that the ſeveral Lines, which are forced to be drawn to repreſent the ſhady Part of any common Print, are by this Means ſcumbled together, and appear as ſoft and united as in any Piece done with Indian Ink.

When you are provided with ſuch Prints as you like, cut off the Paper of the Margin, ſo that none be left but the Print itſelf; then take ſome of the fineſt Crown-glaſs, and have it cut exactly to the Size of your Prints, and, when you have cleaned your Glaſs very well, lay on one Side of it ſome fine Venice Turpentine, as thin as poſſible, with a Bruſh made of Hog's-hair; and, if you perceive the Turpentine to lie unequally, paſs a piece of Wood, made like a flat Ruler over it till it lies equal in every part; then wet the Back of your Print with a Sponge and Water, and lay the pictur'd Side upon the turpentin'd Side of the Glaſs, taking Care that every Part of it lies cloſe to the Glaſs, and that there are no Bubbles or Bliſters to be ſeen; then you may roll it over with a wooden Roll, made like a Cylinder of two Inches diameter, to fix it cloſe to the Glaſs; and when that is done, wet the Back of the Print again with a Sponge and Water, till the Paper will rub off with your Fingers; then rub it gently till there remains only the Picture itſelf upon the Glaſs; ſo will you have all the Lines and Shades very viſible, as if it was a fine drawing in Indian Ink: Then let it remain till the next Day to dry, for elſe the Colours would not take, becauſe they are ground in Oil.

SECT. I. *Colours for Painting on Glaſs with the Neceſſaries for ſuch a Work.*

At moſt Colour-ſhops of note in *London*, we may meet with Colours of ſeveral ſorts ground in Oil, and tied up in little Bladders to be ſold at Three pence, a Groat, or Six pence a piece, according as they are more or leſs valuable: Of theſe provide as follow.

Whites.

Whites.
Flake White,
White-Lead.

Yellows.
Engliſh Pink,
Yellow Oaker,
Dutch Pink,
Yellow Orpiment.

Reds.
Roſe Pink,
Vermillion,
Red-Lead,
Indian Red,
Lake,
Carmine.

Blues.
Ultramarine,
Blue Biſe.
Verditer,
Pruſſian Blue,
Sanders Blue,
Indigo,

Blacks.
Lamp Black,
Ivory Black.

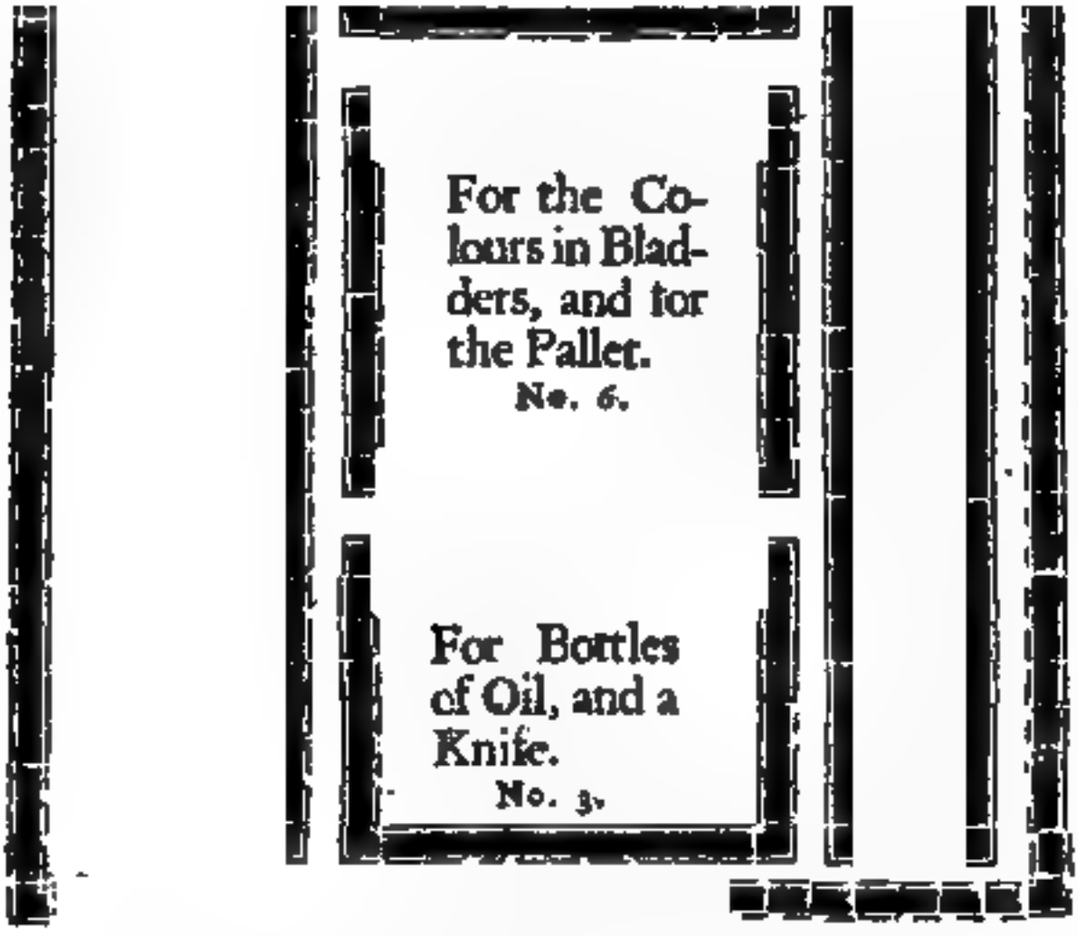
Greens.
Verdigreaſe diſtill'd,
Verdigreaſe and Yellow Oaker mixt,
Verdigreaſe and Engliſh Pink mixt,
Verdigreaſe and Dutch Pink mixt.

Browns.
Spaniſh Brown,
Umber.

When you are provided with theſe Colours, you may mix them one with another to what Degree of Colour you think proper upon a *Pallet*, with a ſmooth Knife, with a tender bending Blade, adding a little more of one Colour to another, mixing them well till you have what you want.

To get the Colour out of the Bladders, prick a Hole at the Bottom of each Bladder you deſign to uſe, and preſs the Bladder till you have Colour enough upon your *Pallet* for your preſent Uſe; for in a Day's Time the Colours will dry, and can never be recovered.

Provide on this Occaſion a Box about two Foot and a half long, about five Inches high, and ſixteen Inches wide, with Partitions in it as follow.



The Uſe of this Box, which is to keep all your painting Things together, and preſerve them clean, I ſhall here very particularly explain.

No. 1. At Number 1 muſt be a Box of tinn'd Iron to be placed in the wooden Box, becauſe it muſt hold Oil of Turpentine to clean your pencils when you have done work.

When you paint you muſt take care to uſe only one pencil in a Colour, or, in other words, to have a pencil for each Colour; and as ſoon as you have done uſing them for the Day, clean them from the Colours, by dipping them into the Oil of Turpentine, and laying the hairy part of the pencil on the tinn'd Di-

No. 2. viſion, between Number 1 and Number 2, preſs your Finger hard on the Hair, and draw it four or five times over the Tin, then will the Colours which

which came out of the Pencils, fall into the Tin-box, Number 2, and by that Means the Pencils will be clean and the ſeveral Mixtures of Colours, that fall there with their Oils, will become a good Size for Gold.

No. 5. Then lay your Pencils with their Sticks in the Box No. 5, and they will be fit for Uſe another Time.

Note, the Pencils ſhould be of two Sorts, that is, ſome of Camel's-hair to paint with, ſuch as will come to a Point when the Colour is in them, and ſome dry Bruſhes of white Hair, never to be dipp'd in Colour, but uſed only to ſcumble or join one Colour in another when they are juſt laid on, ſo that they appear ſoft, and you cannot diſtinguiſh where any one leaves off abruptly.

You ought at leaſt to have three Dozen of Camel's Hair pencils of all Sizes, and a Dozen and half of rough Bruſhes, with Sticks to each about ten Inches or a Foot long; the Sticks may be bought ready made at the Colour-ſhops; they are commonly made of Cedar or Brazil-wood, but ſome nice Perſons have them turn'd in Ivory.

No. 4. At numb. 4, you ſhould have a Caſe divided of Wood in ſeveral Parts to keep your dry Colours in, ſuch as Carmine and Ultramarine, with others that you may keep by you to grind when you want them, for ſometimes you may have Occaſion in the Country to grind a Colour that you want.

The Reaſon of having Diviſions made in this Box is to keep theſe Colours from mixing with each other, and thereby ſpoiling one another; for if there were no ſeparate Apartments, ſometimes in a haſty taking out or putting in of theſe Colours you may diſturb the Papers they are commonly wrapp'd in ſo much, that ſome of the Colours will be ſpilled. The fine or rich Colours, ſuch as Ultramarine or Carmine, may rather be bought in Powder than ground in Oil; for the firſt is worth near four Pounds an Ounce, and the Carmine, if 'tis good, worth about twenty Shillings; therefore it is better to have theſe in Powder, than to have them ground in Oil at the Colour-ſhops; for by Degrees they will dry, though in the Bladders, and you will have ſo much Loſs from them.

The

The Method to grind theſe in Oil, is to put a little of either of them upon a poliſhed Marble, and with a Drop or two of Oil mix them well with a ſoft bladed Knife, and lay it on your *Pallet*; but of the Ultramarine and Carmine a very little will ſerve, for the leaſt Touch on the light Sides of your Drawing will give a Luſtre to your Picture; and if it be Ultramarine it will be laſting, whereas I have a great deal of Reaſon to ſuſpect, that the Pruſſian Blue will not, if it is expoſed to the Weather, as I have obſerved in ſome Sign-paintings of two Years ſtanding, and there I find that Colour to change into a dirty Yellow: But if we mix the Pruſſian Blue with Varniſh, it will hold and laſt like Ultramarine; in ſhort, the Air muſt be kept from it to preſerve it.

If we want to grind any other Colours coarſer than theſe in their Powder, we muſt have a Muller, which muſt be made of one of the hardeſt Stones we can get, and finely poliſhed; Porphyry would be the beſt, made in the Shape of a Sugar-loaf, if one could get it: But for the Shape, the Sugar loaf Figure is the eaſieſt for any one to turn with their Hand, and every Painter knows the Way. Marble is good, or any Stone that will poliſh; nay, even Glaſs, or Cryſtal, or any ſuch like Thing; but, if you have a great Quantity of Colour to grind, you muſt conſider, that you muſt have a large Quantity of Oil; but never ſo much as to overcome the Quantity of Colour. In the grinding part, you may obſerve, that the Colour will frequently turn from under the Muller, then with a thin Knife ſcrape it up, and place it under the Muller again, till 'tis as fine as you deſire it: Then immediately put it into a Piece of Bladder, firſt having the Bladder immerged in warm Water to ſoften it; tie it up, and let it remain to be uſed as I have directed the others.

Number 3 may in its Uſe be explain'd thus.

No. 3. Let that Partition be lined with Tin, or Iron tinn'd, becauſe this is to encloſe the Bladders of Oils, which you ſhould always keep by you, as Oil of Linſeed and Turpentine, Nut-oil, and burnt Oil, and in the taking of theſe in and out, the Apartment would be

be greaſy, and ſtain the Wood, whereas the Tin will preſerve it from any Stain from the Oils.

No. 6. Number 6 is the middle of the Box, and ſhould be made of tinn'd Iron likewiſe, to take out and put in at pleaſure, for 'tis to contain all the Bladders of oiled Colours; and, as ſome of them will be frequently uſed, the Reſervoir for them muſt in Time become greaſy; and over them is to be laid the *Pallet*, which, every Night after you have done your Work, ſhould be cleaned of the Colours you have put upon it; or elſe covered with its Colours in Water, to keep them uſeful till the next Day. To keep your *Pallet* clean, rub it with a coarſe Linnen cloath with Oil of Turpentine, and then rub it till 'tis dry (as one may call it) with Nut or Linſeed oil.

But take what care you will of your Oil-colours in ſmall Quantities, when they are expoſed to the Air, there will be a Coat of thick hard Scale over them in a Day or two, which indeed one may take off with a Knife; but we loſe much of the Colour, and ſome of them are very coſtly. When you take off the ſcaly Part, the reſt of the Colour is fit to uſe; and, if it is too thick, then put a Drop or two of Linſeed-oil to it, and mix it well with your tender Knife. Some People when they uſe Ultramarine and Carmine, becauſe of their great Price, only put a Drop of Oil on their *Pallet*, and put as much Colour to it as they think will be enough, only working them together with a Knife; which indeed is more ſaving, than to mix it on the Stone.

SECT. II. *How to uſe the* Colours *in Painting on Glaſs.*

As the Lines and Shades of your Picture happen to open, ſo you ought to diſpoſe your Colours, that is, lay on the lighter Colours firſt on the light Places of your Prints, and the darker over the ſhaded Places; and, if you have once laid on the brighter Colours, 'tis no great matter whether the darker Sorts are laid a little over them;

them: For the firſt Colour laid on will hide thoſe you lay on afterwards; as for Example:

YELLOWS.

The lighteſt Yellow may be laid on firſt, and the Dutch Pink will ſhade it.

REDS.

The Red-lead may be laid on firſt, as the brighteſt red Colour, and to ſhade it with Lake or Carmine, will bring your Picture to a beautiful Scarlet, equal to any Tincture of the fineſt Dye of Cochineal.

BLUES.

Lay on firſt the blue Biſe, and ſhade it with Indigo; or elſe take Ultramarine, and lay it on in the Lights, and ſhade it with Indigo.

GREENS.

Lay on firſt ſome Verdigreaſe, and then the Mixture I have mentioned of that and the Dutch Pink: But you may make this Green as yellow as you pleaſe, by adding more Dutch Pink, as you ſee occaſion.

It is to be noted, that, when any of theſe Colours are too ſtrong, they may be lightened to any Degree, by mixing White with them upon your *Pallet*; or you may darken them, by mixing them with the deeper Colours: But they muſt be well mixt with the Knife, before you uſe them.

When you have painted your Glaſs, it muſt ſtand three or four Days, before it will be dry enough to put in a Frame.

CHAP. III.

Of the making of Crayons *for dry colouring.*

THE Uſe of Crayons for dry Colours is ſo neceſſary in taking of Views and Proſpects, and there are ſo few Crayons that are good of the Sort, that I think

think the Way of making them a neceſſary Article to be known to every one, who is a Lover of Drawing and Painting.

WHITE.

As for *White*, we have no occaſion of any other than white ſoft Chalk, which ſhould be ſawed into Lengths of an Inch and half or two Inches. [There are little Saws made on purpoſe for ſuch Uſes about four Inches long and very thin.] When you have ſaw'd out your Crayons of Chalk, which ſhould be at moſt a Quarter of an Inch thick, round off the Corners with a Penknife, and point them, by drawing your Penknife upwards from the Place where the Point is to be. [You ought to have a Dozen or two of theſe to lie in a little Caſe by themſelves, or they will be diſcoloured by the other Colours.]

YELLOW Paſtils, or Crayons.

Yellows come next, which ſhould be divided into four or five Degrees of Colour.

Firſt. Take ſome Grounds of Starch and Flour of Brimſtone, mix them well with a Knife upon a poliſhed Marble, ſo that they produce the Colour of Straw, or a Yellow as faintly will ſhew itſelf; then pour a little Milk to them, or a little pale Ale wort, till the Colour become like a Paſte; then ſpread the Paſte on a ſmooth piece of Chalk, with a broad Knife, till it is about the third Part of an Inch thick, and let it lie till 'tis half dry, then with a ſharp Knife cut it in Lengths of an Inch and half, about the fourth Part of an Inch wide, and roll it thin between two little pieces of Board, till they are round like a Straw, and point them as I have directed for the Chalk. If you pleaſe you may uſe ground Chalk, inſtead of Grounds of Starch.

2d Yellow. It is made of yellow Oker, ground well with fair Water, and then dried and beat. Mix this with ground Chalk, in ſuch Quantity as it will be a little deeper than the former Colour, and mix them up with pale Ale wort, in which a little white Sugar-candy may be diſſolved: And make theſe Crayons as the former.

3d Yellow. Grind yellow Oker with Water with a Stone and Muller, and when 'tis dry beat it very fine, and make it into Paſtils, or Crayons, with pale Ale-wort, or Size made with Glovers Leather, boiled in Water till it comes to a Jelly; uſe it as before directed, and roll the Paſtils between two Boards.

4th Yellow. Take Engliſh Pink, grind it as the former with Water, and when 'tis dry beat it fine, and mix it with a very little ground Chalk, till 'tis deeper than the former Colour; then put to it ſome Wort of pale Ale, and ſtir all well together, and make it into Paſtils, or Crayons, by rolling in the foregoing Manner.

5th Yellow. Engliſh Pink is to be alone ground as the former, and to be made in Paſtils, or Crayons, by itſelf with pale Ale-wort.

6th Yellow. Dutch Pink is to be uſed as the former, and mixt with pale Ale-wort, or Milk, and ſo rolled and dried.

7th Yellow. Orpiment is one of the moſt poiſonous Colours that can be uſed; however, it is one of the moſt beautiful Sort, and is next Orange colour. This muſt have a little ground Chalk mixt with it, well tempered together, and made up with pale Ale-wort, with a little Gum dragon diſſolved in it: And roll them up into Paſtils, as you did the former.

ORANGE Colours.

1ſt Orange-Colour. Take yellow Orpiment, mix it with pale Ale-wort, and when it is in Paſte, roll it, and make it into Paſtils, or Crayons.

2d Orange-Colour. Take Orpiment and Red-lead: (but the Red-lead muſt be very finely ground in Water, and dried) then mix a little of this with your Orpiment, till you have the Colour you deſire; and putting to it ſome Ale wort, wherein ſome Gum-dragon has been diſſolved, make it into a Paſte, and roll it into Paſtils, or Crayons.

3d Orange-Colour. Take Engliſh Pink, grind it well, and put to it as much Vermillion as will make it of the Colour you deſire; mix theſe up with Ale wort, that has

has been boiled till 'tis more glutinous than ordinary, and make it into Paſtils, as before directed.

4th Orange-Colour. Take Engliſh Pink finely ground, and put to it as much Red lead, well ground, as will make it agreeable to your Deſign, mix theſe well with Ale wort boiled to a Thickneſs, and make them into Crayons.

5th Orange Colour. Take ſome Dutch Pink, grind it well, and mix with it ſome Red-lead finely powdered, to the Colour you want; then make this into a Paſte with Ale-wort, or Milk, and roll it up into Crayons as before directed.

Note, In the Mixture of theſe Colours, obſerve that they have as many different Shades as poſſible.

REDS.

1ſt Red. Take Red-lead, grind it well with Water, then dry it and beat it to fine Powder, and put to it ſome Chalk or White lead finely ground, to brighten it; mix this with Ale-wort, wherein a little Gum-dragon has been boiled, make it into a Paſte, and roll it into Crayons. In this you ſhould make ſome of your Paſtils deeper, others paler.

2d Red. Take Red lead, and when 'tis well ground with a Marble and Muller, make it into a Paſte with Ale wort, wherein Gum dragon has been boiled.

3d Red. Red Oker wants no Preparation, but ſawing, as I have directed for Chalk, in the firſt Article,

4th Red. Take Vermillion, grind it fine, and mix with it ſome fine Chalk in Powder, or White lead well pulverized; divide your Compoſition into three Parts, and, by adding more of the White to one than another, make three different Colours; then put to each Ale wort boiled thick, and make them ſeverally into Paſte, and ſo into Crayons.

5th Red. Take Vermillion well ground, and mix it with Ale wort, that has been boiled to a Thickneſs with Gum dragon, till it is a Paſte, then roll it into Paſtils.

6th Red. Take ſome good Lake, grind it well with Water upon a Marble, and when it is well dried and powdered, lay it in three Diviſions, and mix with each

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as much ground Chalk, or White-lead, as will make them of ſeveral Colours; then make them ſeverally into Paſte, and then into Crayons.

7th Red. Take fine Lake, and reduce it to as fine powder as you can with Water, and, when it is dry, and again finely powdered, mix it with Ale-wort, and make it into Paſtils, or Crayons.

8th Red. Take Indian Red, grind it well with Water, and dry it like the other Colours; then mix it with Ale-wort that has been boiled to a Thickneſs with a little Gum dragon: This alone will be a very ſtrong Colour, but you ſhould mix ſome of it with White, in two or three different Manners, to be Shades to one another.

9th Red. Take Roſe-pink, and cut it into the Shape of Crayons, without any preparation. Carmine is too dear for them, for twelve penny-worth would make but a ſmall Crayon.

PURPLES.

1ſt Purple. Take Roſe-pink finely ground and powdered, mix it well with a little Sanders blue, till the powder appears of the Colour you want, then make it into a paſte with Ale-wort thickned with Gum dragon, and roll them into the Figure of Crayons.

2d Purple. Take Lake finely ground, and waſhed, put to it as much blue Biſe as you think proper to make it of a reddiſh Purple, and you ſhould vary this in two or three Manners, each lighter than the other: In the lighter Sorts put a ſufficient Quantity of Chalk, or White lead well ground, and mix them up with Ale-wort boiled to a Thickneſs with Gum dragon, and roll them into Paſtils.

3d Purple. Take ſome Lake well ground, and add to it as much Pruſſian-blue as will make it of the Colour you deſire; mix theſe very well together in ſeveral parcels, making ſome more inclining to red than the others, and to the fainteſt purple of them add ſome ground Chalk at your pleaſure, and make theſe ſeverally into paſte with Ale wort thickened by boiling; ſo make them, after the ſame Manner as the former, into Paſtils.

BLUES.

BLUES.

1*ſt Blue.* Blue Biſe is the lighteſt blue Colour we uſe, and muſt be well ground with common Water on a fine Marble; then let it dry, and reduce it again to powder, then lay it in four parcels, and put to three of them, in different proportions, ſome ground Chalk, or White-lead; ſo that when they come to be mixt, every one may be lighter than the other; mix theſe ſeparately with Ale-wort that is thickened with Scraps of Glovers Leather, and when they are in a paſte to your mind, make them into Crayons: And the fourth part of the blue Biſe muſt be made up by itſelf, in the ſame Manner.

2 *Blue.* Take Verditer well ground on a fine Marble, lay it in four parcels, and mix one of them purely with a thin Size, made of white Glovers Shreds and Ale-wort, and the other three parts mix with ſeveral proportions of ground Chalk, or White-lead well ground, ſo as to make Shades to one another; make theſe into paſte with Ale-wort thickened with Gum-dragon, and ſo into Crayons.

3*d Blue.* Take ſome Pruſſian-blue, and grind it well; then lay it in four parcels on your Marble, and mix with three of them ſome ground Chalk, or White lead well ground, to make them of different degrees of Colour; and the fourth part muſt be alone. Make the three mixed Colours into paſte with pale Ale-wort boiled till it thickens; and the plain Colour muſt be made into a paſte with ſome Ale wort boiled and thickened with white Shavings of Leather from the Glovers. Make all theſe into Crayons.

4*th Blue.* Take Rock Indigo, and grind it well with Water on a Marble, dry it and powder it again, and then divide it in parcels, as is directed above, and with two or three parts of them mix different proportions of ground Chalk, or White-lead ground, to make them paler or deeper; and one part muſt be the ſimple Colour. Put to the mixt Colours ſome Ale wort thickened with boiling, and mix them to paſtes, then roll them into Crayons.

As for the plain Indigo, mix it with Ale-wort thickened with Glovers Shreds of white Leather, by boiling, and make it into Paſtils.

BLACKS.

1ſt Black. The Black which is commonly uſed as a Crayon, is Charcole cut into Lengths; the ſofteſt and beſt is that which is made of Willow. Have at leaſt a Dozen or two of theſe; for black and white are uſed a great deal more than any other colour.

2d Black. Take Ivory Black ground very fine with common Water, and put to it a very little ground Indigo; for a blueiſh Caſt will enliven your Black, and help it from that Deadneſs, which a plain Black always carries with it.

BROWNS.

1ſt Brown. Take for a light Brown, ſome Fullers-earth, grind it well with Water, and mix it with ſome ground Chalk, or White-lead, to make it in different Colours, that is, to make it lighter as you think fit; mix this up with pale Ale-wort boiled thick, and at leaſt have four Sorts of it.

2d Brown. Take ſome Spaniſh Brown, grind it very well, and mix with it ſome Fullers-earth, to make it lighter, for the Spaniſh-brown is a dark Colour of itſelf; and, when you have made this Mixture, you may put to ſome part of it a little white Chalk ground, or White-lead, in different proportions, to have them of various Shades: Theſe are for the lighter Browns; and mix them ſeverally in Paſtes with a light Size of Fiſh-glue, or Iſinglaſs, and Water, and ſome of them with pale Ale wort boiled thin, or thick Water gruel boiled with Gum dragon; then make them into Paſtils.

3d Brown. Take Spaniſh Brown well ground, and ſome Indian-red, mix them well together, and put to them ſome pale Ale-wort, till they become a Paſte; you may make ſome of them lighter, if you will, with ground Chalk, or White-lead; and then roll them into Crayons.

GREENS.

GREENS.

1ſt Green. Take ſome Verdigreaſe, and boil it in ſharp Vinegar, and add to it, when it boils, a little Tartar powdered, which will diſſolve the Verdigreaſe ſo, that the Liquor will be of a fine Colour. Then ſet the Liquor in little Gallipots expoſed to the Air, which will dry the Colour, and then it will diſſolve in common Water. This may be taken with juſt as much warm Ale-wort as will cover it, and will diſſolve the Green; then make it into Paſtils with white Chalk ground, as much as you think proper.

2d Green. Grind diſtilled Verdigreaſe with Vinegar on a Marble, waſh it well with Water; the Manner of which is, to throw the Verdigreaſe into Water, and in half a Minute to pour off the Water into a Cup, and let it ſettle; then pour the Water from it, and waſh it again in the ſame Way; when this is dry, make it into Crayons with Ale-wort.

3d Green. Take Verdigreaſe, prepared as before, finely powdered, and mix it with a little *Pruſſian Blue* in ſeveral proportions: In the lighteſt Sorts put a little White, or the brighteſt Yellow, well ground, to make Varieties of Colour; mix all theſe with pale Ale wort boiled to a Thickneſs.

4th Green. Take ſome Indigo well ground, and ſome Engliſh-pink, mix them well together upon a Marble; and, when they are well powdered, make them into a Paſte, and roll them up with a ſoft Size and Oil, till they are of the Figure of Crayons; or with pale Ale-wort, or thick Water-gruel; but when we uſe Water-gruel, it muſt be ſtrained, and boiled with ſome Gum-dragon.

5th Green. Take ſome blue Biſe ground fine. and put to it ſome Dutch pink well ground; mix them in Parcels; and prepare them in Shades to one another; then make them into Paſtes, and roll them into Crayons. You may have five or ſix Varieties of theſe. *Note,* The Liquid which you are to uſe to make them into Paſtils muſt be Ale-wort boiled a little thick.

6th Green. Grind Rock-Indigo very fine with Water on a Marble, and, when 'tis dry, beat it fine again; then lay it in parcels on the Marble, and put to ſome of them a little flower of Brimſtone, in greater or leſſer Quantities, and to others flower of Brimſtone and Dutch-pink mixt, ſo that you may have Variety of Colours; when theſe different Shades are as you intend them, then make them into paſtes with Ale-wort thickned by boiling with white Glovers Leather-ſhreds, or with a little Gum-dragon.

7th Green. Grind ſome Rock-Indigo with Water, and add to it, in ſeveral parcels, as much Dutch pink as you ſee convenient, to make your Greens of various Shades; when theſe are well mixt, put to them ſome Ale-wort thickened by boiling, and make them into Paſtes, and, when they will roll, make them into Crayons.

Memorandum. The Reaſon why theſe Crayons are better than commonly thoſe which are bought at the Shops is, becauſe they are generally made too ſtiff with Gums, and ſo will hardly touch the Paper; but all theſe will work freely, and expreſs the ſeveral Colours you deſire.

We muſt conſider, that the Reaſon why we make five or ſix Shades of each Colour is, becauſe in this Caſe we cannot mix any when we uſe them; whereas in Oil-painting, and painting in Water colours, we may make what Mixtures we pleaſe in an inſtant: And when we ſet about any painting or drawing in Crayons, which happens to have a great Variety of Colours in it, we ought not to be without every Sort of Colour that can be thought on. *Note*, Theſe Colours ſhould be kept in a Box partitioned, every Sort by itſelf, *viz.*

The *White.*

Yellows. Lay the brighteſt Sorts in one, and the deeper Sorts in another, till you come towards the Orange-colours.

Orange-Colours. The lighter Sorts of Orange-colours in an Apartment, and the deeper in another.

Reds. The paler Sorts, or Fleſh-colours, in one Apartment, the brighter Reds in another, the ſtronger Reds

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in another, and the deepeſt Reds in another, every one with its proper Shades, till we come towards purple.

Purples. The paler Sorts inclining to red in one Apartment, the next Sorts, more inclining to blue, in another, with their Shades; and theſe which are next to blue with their Shades, in a part by themſelves.

Blues ſhould follow the purples. Put the lighteſt preparations in the firſt Apartment, the next Degree into another, a third into another, and the fourth, to the laſt, into others: But keep the Pruſſian blue quite by itſelf, and its Mixtures by themſelves; it ſerves very well in this Way to ſupply the place of Ultramarine; and, as it is much cheaper, I forbear to mention the Uſe of Ultramarine blue in this Caſe, which is extravagant in the price; for a Crayon of it could not be made under half a Guinea: And beſides, in this Way of Crayon drawing, the preparation of Pruſſian-blue does very well anſwer the ſame End; though that Colour will not do in Water-colours, nor even laſt in Oil-colours, if it comes to be expoſed to the Weather; for in either Caſe it changes to a dirty Yellow-colour; but I find that the Crayons hold, by being imbodied as I have directed.

Greens ſhould be divided into three or four Sorts, and with their Shades, be laid in ſeveral Apartments.

Browns ſhould be likewiſe put in three or four parcels, with their proper Shades, to be laid in each Apartment of one great Box. And you ſhould never be without Crayons of Charcole in another Caſe. With all theſe you will be compleatly furniſhed; and, when you go out to take any View, have one of every Sort in a little Box, divided as the foregoing, to carry in your pocket.

The paper, which you ſhould uſe on this Occaſion, ſhould be *Venice* rough paper, almoſt like our whited brown paper, or even the whited brown paper which they ſell at every Chandlers ſhop; the ſtiffer it is the better; that which they call Cap paper is the beſt, as I have found by Experience; for upon ſuch the Colours eaſily diſtribute themſelves. And by this Means every one may take Figures in their proper Colours as they ſee them; for they may match the Colours as they appear

with

with the Crayons they have by them; and, as the Crayons are dry, they will not alter their Colour, but the wetted Colours will appear deeper when they are wet, than when they are dry, which will deceive the Eye of a Beginner.

Inſtructions for the Uſe of Crayons.

Remember when you uſe theſe Crayons, that you point them from the bottom upwards, and make not the points too ſharp, unleſs in the white Chalk, the red Oker, and the Charcole.

One may make a pretty Drawing on blue Paper with only Chalk and Charcole; the ſtrong Lights and the dark Shades make a fine Contraſt, and a pleaſant Appearance in a Drawing.

CHAP. IV.

Curious Directions for Drawing with Crayons.

THE Manner of Drawing with Crayons is much more expeditious, where we would expreſs the Objects we are to take in Colours, than painting in Water-colours; for, before we uſe them to ſtrike the Colours we intend, only a ſlight Out-line need be made, either with Chalk, Charcoal, of Red oker, of the Subject we would repreſent. We may bring theſe Drawings to a delicate Softneſs and fine Expreſſion, but then they muſt be always kept in Books, or under Glaſſes of Frames, where they may not rub; for a touch of a rude Finger, unacquainted with the performance, may change the Shades or Lights, and ſo alter the fine Deſign of the Work.

But we muſt firſt provide an indifferent coarſe paper, of the Colour of whited brown paper, for the colour of the paper being a little dark, gives a better Opportunity

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of ſhewing the light or white Strokes of our Crayons, and will give a good Relief to the tender parts of our Work.

Again, the little Roughneſs of ſuch paper will make the Crayons of every colour expreſs themſelves much ſtronger, than if we were to draw with them upon ſmooth paper.

Theſe Crayons of every Sort of colour, you will have occaſion for, are made in Paſtils, and ſold by moſt of the moſt noted Colour-men in *London*; a few will ſerve you at firſt to try your Hand, and in taking off Sketches of proſpects are very uſeful, when you are once Maſter of Drawing enough to take the Out-lines: for a little Box of them will ſerve to mark the colours which you will remark in the different parts of your proſpect, without the Trouble of Water and Gum-water, which muſt be had if we uſe Water-colours, and would be troubleſome to get for your Uſe in the Fields, where you ſhould take theſe proſpects from.

Theſe Crayons being of ſo eaſy a Uſe may encourage us to colour our proſpects after the Life, where we ſhall diſcover the different colours of the ſeveral Fields which are very different from one another, according as they happen to be cropp'd, or ſituated, and then the Woods which are in View commonly conſiſt of Variety of Trees, which have every one of them their different colour, which at once we may ſee in our Crayons, and mark it as it happens to be upon our Drawing: But if our Wood ſhould prove all of one Sort of Tree, we ſhall ſtill find a great Variety of colours in the Trees produced by their different Situation; and if we match our Crayons well with the colours of our Trees, and other parts of the proſpect, we ſhall learn by it what is a natural Repreſentation of Things.

But to do this effectually, if you cannot furniſh a Draught in colour at once, take the ſame Hour the next Day to do it in, becauſe as the Sun happens to be at one point, at one Hour of the Day, ſo the next Day it will be about the ſame point at the ſame Hour; and if you was to miſs that Time, the Shades of all your Objects will be altered, and your colours will be vary'd: So you

ſhould likewiſe take either the Mornings or Evenings for this purpoſe, for then you will have ſtrong Shades and ſtrong Lights, which will give a pleaſing Variety to your picture.. Memorandum, if you have a bright Morning or Evening, when you begin, finiſh your work when the Hours of your Drawing are as bright as they were at firſt, if you can.

For want of ſuch Obſervations many a one, who is a good Draughts-man ſpoils a fine Drawing; he will ſometimes place his Greens improperly, and give Strengths where only little Touches ſhould be us'd. And ſome who are Beginners in theſe Affairs, will encourage a favourite colour, and neglect the proper ornamental colours.

I think I have not ſeen finer proſpects to teach us this Art, than what are on both ſides *Guilford downs*, *Box-hill*, *Leith hill*, *Richmond-hill*, and about *High wickham*, where one has fine Vales, beautiful Hills, and delightful Woods. In the Spring and Autumn, to look on the Woods, you may almoſt perceive every colour in our Collection; ſome Trees will open with a yellowiſh Caſt, others with a ſharp blueiſh Green, ſome Brown, and others of a reddiſh Colour; and ſo in the dying away of the Leaves in Autumn, or towards the Fall of the Leaf, you will ſee as much Variety.

And you will find then the Fields, and all the changeable parts of the Country, of different Colours; about half a ſcore Drawings in Crayons of theſe Sorts, will enliven your Imagination, and teach you the Art of colouring in the moſt natural, and conſequently the moſt beautiful Manner.

But if you deſign principally to draw Landſcapes in this Manner, I adviſe to make your Out-lines, with Charcoal or Black-lead, very gently touch'd, but Black-lead is the beſt.

When in this Way of Drawing, one has an Object where a light colour and a ſhaded colour ſhould fall naturally into one another, then, when you have mark'd your paper with both, take a dry ſhort hair'd Pencil, and bruſh it gently between both, 'till you have mixt them ſo eaſily together, that you cannot diſcern where

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the Lights and the Shades ſeparate, or where the Light and the Shade part from one another; but this is properly for the larger Drawings, which are to appear ſoft and tender.

If one wants a Pencil, of the ſort I ſpeak of, take a piece of ſoft whited brown paper, and roll it, or twiſt it up till 'tis of the Bigneſs of a Camel's Hair pencil, of the Size we generally uſe in Water-colours, and when you have rubb'd the pointed End gently on a rough piece of clean Board, or a piece of rough brown Paper, 'twill ſerve inſtead of a Pencil to * ſcumble your Work or make one colour flow into another.

There remains now only to tell you how you ought, in this particular way of Drawing, to cut or point your Crayons; take a fine Penknife, and inſtead of Drawing it down from the Body of the Crayon towards the Point, as one does in pointing a Black-lead Pencil, begin at the Point and draw your Knife upwards, in ſuch a Manner, as to leave your Crayon of the ſame Figure you would require a Black-lead Pencil to be of when 'twas ſharpen'd; for theſe Crayons are hardly two Inches long, and are brittle enough: Beſides, if they have any Knots in them, they will be very apt to break.

One may obſerve too, before we conclude this Chapter of drawing and colouring with Crayons, that all theſe appear immediately of the Colour one would expreſs, whereas the Colours to be us'd with Water will be much deeper or darker when the Water is put to them, than they will prove when they are dry, which may confound a Beginner, and occaſion him to make his Colour lighter, but when this comes to dry, he will ſee his Error.

* Scumbling is rubbing in gently one Colour into another.

CHAP. V.

Concerning the Manner of Etching, *or* Hetching, *to be done with* Aqua-fortis *on Copper-plates.*

YOUR Copper plates muſt be very ſmooth, and poliſhed on one Side, as they are done for the Engravers.

Then make a Varniſh of Petrolium, Bees-wax and Turpentine melted together in a glazed Earthen-veſſel; when it is cold, put it into a piece of Mantua Silk, and tye it up, then warm the backſide of the Plate over ſome hot Small-coal Duſt, and paſs the Silk with the Mixture in it over the fore-ſide of the Plate, till 'tis all covered; after this, hold the varniſhed part of the Plate over the Smoke of a Candle, moving it backwards and forwards till 'tis all equally blacked.

You muſt next take your Drawing, or Print, and rub the back of it with Chalk, or red Oker; (but Chalk is the beſt) and when the back of this Drawing is rubbed a little with a woollen Cloth, lay the Chalk part of the Print upon the Varniſh, and fixing it well, draw over all the Strokes with a blunt pointed Needle, marking it as you go along the Shades; ſo you will have all the Lines marked upon your Varniſh.

Then provide four or five Needles of different Sizes, and with the fineſt make the finer Lines, and ſo by Degrees on to the Larger; tracing them over the Varniſh upon the Lines of the Drawing, till they touch the Copper plate; and, to prevent your rubbing out any of the Chalk-lines, you muſt have an even piece of Wood ſupported by two Bits to move before you, and to reſt your Hand upon; when this is done, make your Shades; and when they are done, border round the Plate ſome green

Wax, which, being put in warm Water, will become ſoft; and then pour on *Aquafortis* with a third part of Water; and, when you think the *Aquafortis* has eaten deep enough in the light part, pour off your Water, and waſh the Plate with common Water; dry it, and, with a Pencil of Camel's Hair, paint over the lighteſt parts with common Varniſh; then pour on again your *Aquafortis*, and let it eat into the Copper a little more, and, when you think that's enough, uſe the Plate as you did before, and ſo on to the laſt: Then take off your green Wax and Varniſh, by warming the Plate as you did at firſt; and clean the Plate with a coarſe piece of Linen, without any thing in it that may ſcratch the Plate; when this is done, you may have your Plate touched up with a Graver, or you may ſend it to the Rolling-preſs for a Proof, and then the Engraver can ſee beſt what Sharpneſs or Amendments ought to be made.

CHAP. VI.

Of Japanning, and Indian Varniſhes.

SECT. I. *Of Japanning Metals.*

IN japanning of Metals we muſt take notice, that Steel or Iron may be japanned or varniſhed with any Colour. I have only ſeen it done by a young Gentleman of *Montpelier*, who performed it extreamly well, and from him I had the Receipt.

The part of the Metal which we deſign to japan in Colours ſhould not be poliſhed; but the parts of the Metal, which ought to be poliſhed, ſhould be done firſt, or elſe, if we poliſh them after the painting, ſome of the Colour may be diſturbed or taken off. The firſt Proof I ſaw of this Work was a pair Scizzars, where, from the Blades to the Rings, there were the Figures of Storks holding the Rings in their Mouths, which Rings were

of

of Silver. I do not know that I ever saw any Thing so genteel; and the Gentleman before mentioned was kind enough to give me the following Method of doing it.

Take any Colour you have a mind to, and grind it well with Water with a Stone and Muller; then let it dry, and ground it in a Mortar, and sift it if there is Occasion; then, instead of Oil, mix it with white Varnish, and paint with it what you think proper.

The *Whites* are Ceruse, or Flesh white.

Yellows are Yellow-oker, English pink, and Dutch-pink.

Reds are Vermillion, Red-lead, and Lake.

Blues are b ue Bise and Indigo.

Blacks are Lamp b'ack, and Ivory or Bone black.

Greens are Verdigrease ground, or Verditer and Dutch-pink ground together.

Browns are Fullers-earth and Spanish-brown.

And *Purples* may be made between red and blue, till you see them mixed to your Mind.

SECT. II. *Of Japanning Iron Snuff boxes, which now are generally covered with a black Varnish, that they may look like China, and gilt about the Edges.*

Take your Iron plates or Snuff boxes, and lay on the following preparation on the Top and Bottom, *viz.* White-lead ground with Water, and dried, then beaten again to fine powder, and mixed with Size; this lay equally on the Top and Bottom of your Snuff-box, and let it dry well. Then about the Rims, or Edges of the Box, lay on some Yellow-oker with Size, and over that some Gold size; when the first is well dried, lay on the Gold-size I have mentioned in the Colour box, you may buy it at the Colour shops; when you lay this on, let it be near dry before you lay on your Leaf gold, that it may stick the better.

You must have a Cushion of woollen Cloth to cut your Leaf-gold upon, that the pieces of Gold may be exactly to your Size, or the Shape you desire.

Then

Then take your Leaf-gold on ſome Cotton, and lay it on the part which is done with Gold-ſize, and dab it on till it lies ſmooth, and let all dry.

When this is done, paint what Figures you pleaſe on the upper and under Side of your Box; upon the White-ground principally with blue Biſe, mixed with white Varniſh, and ſhaded with Indigo. The beſt Figures to repreſent China, may be taken from Tea-cups, or from Saucers, or other pieces of China-ware, which will look beſt if they be blue and white; but one might paint Coats of Arms in all their Colours, or any other Device; and, when theſe are dry, waſh the white part with white Varniſh, and the golden part with the gloden Varniſh.

SECT. III. *White Varniſh, or Amber-Varniſh, from a Manuſcript of Mr.* Boyle's.

Take white Rezin about two Drachms, melt it in a clean glazed Pipkin; then put into it an Ounce of the whiteſt Amber you can get (beat finely to powder) by little and little, ſtirring it with a ſmall Stick over a gentle Fire till it diſſolves, pouring in now and then a little Oil of Turpentine, when you find it growing ſtiff; ſo continue till all your Amber is melted; but you muſt take care you do not ſet your Houſe on fire, for the very Vapours of the Oil of Turpentine will take fire by Heat only; but, if it happens to do ſo any where, put immediately a flat Board, or wet Blanket over the fiery Pot, and by keeping the Air from it you will put it out, or ſuffocate it: Therefore, when I make this Varniſh, I uſe the Caution to melt my Rezin in a Glaſs of a Cylindrick Figure in a Bed of hot Sand, after the Glaſs has been well *annealed* or warmed by degrees in the Sand, under which you muſt keep a gentle Fire. When you have made your Varniſh, pour it into a coarſe Linen bag, and preſs it between two hot Boards of Oak or Iron, and uſe it with any of your Colours, as well as to varniſh them over when they are painted: But to cover Gold, you muſt take the following Varniſh.

You muſt note, that when you have varniſhed your Snuff-boxes with this white Varniſh, you may put them in a declining Oven, which will harden the Varniſh.

SECT. IV. *Hard Varniſh, that will bear the Muffle, (from a Manuſcript of Mr.* Boyle's*) to lay over Gold, or Braſs, or any other Metal that appears like Gold, to keep it from changing black, as the* Bath-*Metal and ſuch others will do, when they are expoſed to the Air.*

Take of Colophony, which you may buy at the Druggiſts, half an Ounce, melt it in a glazed Veſſel; then ſtrew in by degrees an Ounce of the Powder of Amber, ſtirring it all the while; and when it begins to harden, or reſiſt the Stick, put in a little Oil of Turpentine, which will immediately ſoften it; then take an Ounce of Gum-copal powdered, and ſprinkle that in as you did the Amber, every now and then pouring in ſome Oil of Turpentine, and ſtrain the Varniſh as I have directed in the foregoing. This is proper to lay upon your Gold, and the Things done with it muſt be put in a declining Oven three or four Days ſucceſſively, and then it will reſiſt even Fire.

SECT. V. *To japan* Braſs, *ſuch as is uſed to gild Braſs-buttons, or make them look like Gold.*

We may uſe this upon Gold-leaf, or upon that which is called the *German* Leaf-gold, or upon Braſs, or upon the *Bath*-Metal, which are deſigned to imitate Gold.

Take a Quart of Spirit of Wine, and put it in a Retort-glaſs, then add half an Ounce of *Gambege*, an Ounce of *Lake*, and an Ounce of Gumamaſtick; ſet this in a Sand-heat for ſix Days, or near the Fire, or put the Body of the Retort frequently in warm Water, ſhaking it twice or thrice a Day, then put it over a Pan of warm Small coal Duſt; when your Metal is well cleaned, paint it over thinly with this Varniſh, and it will appear like the

the Colours of Gold: You may dry this in a declining Oven, and it will not rub off.

N. B. This is a good Varniſh to mix with any Colours, that incline to Red; and the white Varniſh to mix with thoſe Colours that are pale, or of any other Sort.

CHAP. VII.

Of Japanning upon Wood *or* Paper; *with Receipts for making ſeveral Sorts of* Japan-Wares, *either Gold, Silver, or in Colours.*

IN *Japan* the People have a Method of making Bowls, Plates, and other Veſſels of brown Paper, and ſometimes of fine Saw duſt: Theſe Veſſels are very light and very ſtrong, when they come to be varniſhed; and are in great Eſteem among us. The Method of making ſuch Utenſils I ſhall here diſcloſe.

Take Slips of brown Paper, boil them in common Water, maſhing it with a Stick while it boils, till 'tis almoſt become a Paſte; then take it from the Water, and beat it well in a Mortar, till 'tis ſo reduced as the Rags are in a Paper-mill; then make a ſtrong Gum-water with Gum arabick and common Water, a Quantity ſufficient to cover your Paper-paſte an Inch; put theſe together into a glazed Pipkin, and let them boil, ſtirring them very well, till you think the Paper-paſte is impregnated with the Gum; then have ready your Mould to give your Paſte the Figure you deſign for it. The Mould is made as follows:

For Example, ſuppoſe you deſign to make any Thing of the Figure of a Plate, have a hard piece of Wood turned on one Side of ſuch a Figure, and make a Hole or two in the middle quite through the Wood; [You muſt obſerve this Mould muſt be like the back of a

Plate] when this is done turn another hard piece of Wood of the ſame Figure, about the eighth part of an Inch leſs than the former; but about the Rim or Edge you may have ſome little Ornament carved or ingraved in the Wood. When theſe Moulds are made, oil them very well on the turned Sides, and continue to do ſo till they are well ſoaked with Oil, then they will be fit for Uſe, when you go to make your Plate of the Paper-paſte, take the Mould with the Hole in it, and oil it afreſh, ſet it even upon a ſtrong Table, and ſpread over it ſome of your paſte as equally as poſſible, ſo as to be in every part about a quarter of an Inch thick; then oil the other Mould very well, and ſet it as exactly as may be on your Paſte, and preſs it hard down; then put a great Weight upon it, and let it remain twenty four Hours. [The Hole at the bottom is for the Water to paſs through, that is preſſed out of the paſte; and the oiling of the Moulds is to prevent the gummed paſte from ſticking to the Wood.] When you perceive the Paſte dry, it will be as hard as a Board, and fit to lay a Ground upon, made with ſtrong Size and Lamp black, letting it dry gently; and when that is dried throughly, then take ſome Ivory black finely ground, and mix it with the following Varniſh.

SECT. I. *To make the ſtrong Japan-Varniſh.*

Take half an Ounce of Colophony, melt it in a glazed Pipkin: then ſprinkle into it by degrees an Ounce and half of Amber finely beaten and ſifted, ſtiring it well, now and then adding ſome Spirit of Turpentine; when this is melted, then ſprinkle in an Ounce and half of Sarcacola finely beaten, ſtirring it all the while, and putting frequently more Spirit of Turpentine, till all is melted; then pour it through a coarſe Hair bag, placed between two hot Boards, and preſs it gently, till the clear is received into a glazed warm Veſſel; with this Varniſh mix your ground Ivory black, and, warming firſt your *Paper-plate*, paint it on before a Fire in a warm Room, as equally as you can, and ſet it in a gentle Oven; then the next Day put it in a hotter Oven, and the

the third Day into one very hot, and let it ſtand till the Oven is quite cold, and then it will be fit for any Uſe, either with Liquors that are cold or hot, and will never change, and 'tis with great Difficulty you can break them. I am of Opinion, that if the Moulds were caſt in any hard Metal, they would do as well as if they were turned in Wood.

SECT. II. *Of making theſe* China-Toys *of the Colour of Gold.*

Prepare your Bowls, Plates, or any other Veſſel, in the ſame Manner as the former, or you may take fine Saw-duſt, if you can have it, and dry it well; then pour on it ſome Turpentine, melted with an equal Quantity of Rezin, and half as much Bees-wax, mix them well, and put to them your dry Saw-duſt, ſtirring all together till the Mixture becomes thick as a Paſte; then take it off the Fire, and warm your Moulds, and ſpread ſome of your Mixture on that with the Hole in the middle, as equally as poſſible, and preſs down the Mould upon it; then ſet it to cool, and your Veſſel will be fit for painting. You may put into this when your Turpentine is melted ſome Sarcaco'a finely powdered, to the Quantity of half the Turpentine, ſtirring it well, and it will harden it: And you ought to make this Compoſition in the open Air, for it will endanger your Houſe.

But which ever of the Mixtures you uſe, if you have a mind to have them appear like Gold, paint them over with Size, and when that begins to ſtick a little to the Figure, lay on Leaf-gold, either *pure*, or that Sort which is brought to us from *Germany*; but the laſt is apt to change green, as moſt of the Preparations of Braſs will do; ſuch as thoſe which are called *Bath*-Metal, and others of the like Sort, which appear like Gold when they are not freſh poliſhed, or cleaned every Day: But as the Air coming upon them will make them alter to an ugly Colour, ſo I chuſe Gold, which is durable, and will never change, and a much finer Colour than any of the former for a Continuance. But though the Leaf-gold, we are to uſe, is tender and may be ſubject to rub off;

off; yet the Varniſh, we ſhall put over it, will keep it bright and entire. When the Gold is laid on, and the flying Pieces bruſhed off, which muſt be done when the Gold-ſize is dry, then apply the following Varniſh to brighten the Gold, and preſerve it from rubbing.

SECT. III. *Varniſh for* Gold, *or ſuch Leaf of Metals as imitate Gold.*

Take ſome Colophony, melt it, and then put in two Ounces of Amber well pulverized, with ſome Spirit of Turpentine, as the Amber thickens, ſtirring it well; then put an Ounce of Gum-elemi well powdered, and ſome more Spirit of Turpentine, ſtill keeping the Liquor ſtirring, till 'tis all well mixed: However, uſe as little Spirit of Turpentine as you can, becauſe the thicker you make your Varniſh for Uſe, the harder it will be. Do this over a Sand-heat in an open Glaſs, and ſtrain it, as you are directed for the former Varniſh.

Uſe this Varniſh alone, firſt warming your Veſſels made of the Paper-paſte, and lay it on with a Painting-bruſh before the Fire; then harden it by degrees, at three ſeveral times, in Ovens; the firſt a ſlow Heat, the next a warmer Oven, and the third a very hot one, and your Veſſels will look like poliſhed Gold.

Note, As for thoſe Veſſels, made with Saw-duſt and the Gums, you may uſe a Varniſh for them made of the ſame Ingredients as above, excepting the Gum-elemi; and this will dry in the Sun, or in a very gentle Warmth.

SECT. IV. *To make your Veſſels of a* red *Colour with gilt Figures on them.*

Prepare your Veſſels as before with *brown Paper-paſte*, and when they are dry, and prepared as directed in the firſt, mix ſome Vermillion, or Red-lead with the Varniſh firſt directed in this Chapter, and uſe it warm; then ſtove it or harden it by degrees in an Oven, and it will be extreamly bright; or elſe lay on your firſt Ground with Size and Vermillion, and in proper Places ſtick on

with

with Gum-arabick and Water, ſome Figures cut out of Prints, as little Sprigs of Flowers, or ſuch like; and when they are dry, paint them over with Gold ſize, and let that remain till 'tis a little ſticking to the Touch; then lay on your Gold, and let that be well cloſed to the Gold ſize, and dried; then, if you would ſhade any part of your Flower, take ſome Ox gall, and, with a fine Camels Hair pencil, trace over the ſhady Parts on the Leaf-gold, and upon that paint with deep Dutch-pink; and, when that is dry, uſe your Varniſh in a warm Place, (I mean that Varniſh directed for the covering of Gold) and ſet it to harden by degrees in an Oven; which Varniſh will ſecure the Leaf-gold (as they call it) brought from *Germany*, from changing, by keeping the Air from it.

SECT. V. *A Method to* ſilver *theſe Japan Veſſels.*

When you have made your Veſſels, and they are well dried, paint them over with Size and ground Chalk, or Whiting; let them dry well, and then paint them over again with the brighteſt Gold ſize you can get; (for there is much Difference in the Colour of it, ſome is almoſt white, and another is more yellow; the firſt is proper for Silver, and the other for Gold) when this Size is almoſt dry, lay on your Leaf-ſilver, and cloſe it well to the Size, bruſhing off the looſe Parts, when 'tis dry, with ſome Cotton. (*Note*, When you lay on your Silver or Leaf-gold, keep it free from the Air; for the leaſt Motion of the Air will rumple your Leaves, and they will not lye ſmooth.) Then uſe the following Varniſh to cover the Silver.

SECT. VI. *To make the Varniſh to cover the Silver.*

Take ſome fine Turpentine, and melt it; then take off white Amber well pulverized about an Ounce an a half, put it by degrees into your glazed Pipkin to the Turpentine, and ſtir it well, adding ſometimes ſome Spirit of Turpentine, till the Amber is all diſſolved; then put to it half an Ounce of Sarcacole beaten, and

half

half an Ounce of Gum-elemi well levigated, pouring in at times more of the Turpentine ſpirit, till all is diſſolved; let your Fire be gentle, and ſtir the Mixture continually while it is on the Fire.

This Varniſh will be white and ſtrong as the former, and ſhould be uſed warm, and is as ſtrong as that which we lay upon Gold; it muſt be hardened by degrees in an Oven, as the Gold varniſh, and your Veſſel will look like poliſhed Silver.

SECT. VII. *Varniſh in Japanning on* Wood, *to mix with ſeveral Colours.*

You muſt, if you deſign to uſe Varniſh to mix with Colours, take Spirit of Turpentine, and diſſolve in it a little Gum-Taccamahacca over the Fire, till it is a little thickened; uſe this with any Colour that has been well ground with Water, and pulverized afterwards. When your Work is done, you may, if you will, varniſh over your Piece with the ſame Varniſh directed to colour Silver; and one might alſo cover Tables of Wood, as well as Tea boards and Plates, or Bowls of Wood, in the ſame Manner, as is mentioned for the Paſtes of Paper and Saw duſt.

SECT. VIII. *Directions for imitating* China, *or* Porcelain ware, *upon Tea tables, Tea-boards,* &c. *upon* Gold *or* Silver *Grounds.*

Prepare your Tea tables, or any other uſeful Thing, as I have mentioned in the foregoing Receipts, and then mark out your Deſigns upon them; make Ovals or Rounds upon them in a good Diſpoſition, ſo as to be uniform, or well adapted to the purpoſe, that they anſwer one another in a regular Manner; then paſte on ſome Paper in proper Places, and when your paper is dry, draw your Deſigns upon them, and paint them with Water colours; then with a Bruſh lay Gold ſize or Silver ſize on the other part, and, when that is near dry, lay on your Leaf-gold or Silver, and, when all is well dried, varniſh over with the white Varniſh, if it be a

Silver

Silver-ground; or, if it is a Gold-ground, varniſh with the ſtrongeſt Varniſh, excepting only the Ovals or Circles of Painting, for theſe muſt be done with the white Varniſh, which is ſo tranſparent, that all the Painting will appear through it. If you lay on a Gold-ground, or any Colour darker than that, then let your Paintings be blue and white; or, if it is Silver or Light ground, then uſe the moſt fiery Colours in your Paintings.

SECT. IX. *The Method of* Glazing Prints *with white Varniſh, ſo as to bear Water, and the Poliſh.*

It is beſt in this Way, firſt to paſte your Print on a Board, or a Piece of Shock-cloth ſtrained on a Frame; to do this well, prepare ſome ſtiff Starch, and with a Sponge, dipt in Water or thin Starch, wet the back of your Print, and, if your deſign to lay it on a Board, dip a large Bruſh in the thick Starch, and bruſh it over the Board as even as poſſible, and let it dry; then a ſecond Time repeat the ſame Work, and ſo continue till the Veins or Grain of the Wood is quite filled: In the laſt Operation, when the Starch is juſt laid on, lay upon it your wet Print as equally as poſſible, ſo that there appear no Bubbles in it, preſs it cloſe every where till it lies ſmooth, and ſo let it dry: In this Operation your Hands muſt be very clean, or elſe you will foil the Print; in about twenty four Hours it will be dry enough to varniſh with the following, *viz.*

White Varniſh for Prints.

Take of *Ichyocolla*, or *Iſinglaſs*, or *Fiſh-glue*, as ſome call it, four Ounces, and pull it into ſmall Pieces, ſeethe this ſlowly in a Quart of Brandy, or ſtrong Spirits, in a glazed Pipkin; and when, by taking out a little, you find it will make a ſtrong Glue, by being a little expoſed to the Air, it will do for your purpoſe; but be ſure to make it as ſtrong as you can; and, while it is warm, with a large Bruſh, waſh over the Print as quick as poſſible, and as ſmooth as may be; let this ſtand a Day, and then bruſh it over again with the ſame Varniſh, or Glue, and let

let it dry very well; then bruſh it over with white Varniſh, at ſuch a Diſtance from the Fire that it may not be too hot, or elſe it will b'iſter, and do this two or three times over; then ſet it by for a Day or two, and bruſh it over with white Varniſh again three or four times, and let it ſtand a Day or two; then varniſh it a third Time with two or three Paſſages of the Bruſh, and in three or four Days poliſh it with a ſoft Linnen-cloth and ſome fine Tripoli, rubbing it very gently, till it remains as ſmooth as poſſible, and clear it with Flour and Oil; it will then appear as bright as Chryſtal; and, if it ſhould at any time be annoyed by Flies, you may waſh it with a Sponge and Water, which will clean it. *Note*, for common Uſe, ſome firſt diſſolve the Iſinglaſs in warm Water, leſt it ſhould take fire.

The white Varniſh.

Take Gum ſandarick of the cleareſt and whiteſt Sort one Pound, Gum-maſtick of the clearſt ſort one Ounce, Gum ſarcacolla the whiteſt one Ounce and half, Venice-Turpentine three Ounces, Benzoin the cleareſt half an Ounce, white Rezin half an Ounce, Gum animæ an Ounce and half, Gum-elemi 3 Ounces; theſe muſt be diſſolved and mixt in the following Manner.

Put your Sarcacolla, and Rezin into a little more Spirits than will cover them to diſſolve; then put your Gum-animæ, Benzoin, and *Venice* Turpentine into a Glaſs, or glazed Veſſel, and pour on as much Spirit as will cover them an Inch, then provide a glazed Veſſel, or Glaſs, for your Gum maſtick and Sandarick, and pour on them ſtrong Spirits, enough to cover them about an Inch, to diſſolve them rightly; then, in a diſtinct Veſſel, of the ſame Sort as before, put your Gum elimi, and cover it with Spirits to diſſolve. [In this Proceſs, you need only pulverize the Gums Animæ, Sarcacolla and Benzoin, and you may break the Rezin a little.] While theſe are diſſolving, for three or four Days, ſhake the Bottles twice or three each Day, then put all theſe together in a glazed Veſſel gently warm'd, ſtiring them well, and ſtrain the Liquor and Gums gently, beginning with the Gums, through a Linnen-cloth; [This will prevent any Dirt getting into your Varniſh] then put it into a Bottle, and

let

let it ſtand a Week before you uſe it, and pour off as much of the clear only, as you think you ſhall want for preſent Uſe. Take Care of Fire.

To paſte Prints upon Cloth for Varniſhing.

If you put your Print upon Shock-cloth well ſtrained in a *Frame*, bruſh over your Cloth with ſtrong Paſte, made with Flour and Water, and immediately bruſh over the back of your Print with well prepared Starch; and then as readily bruſh the Cloth over again with the ſame Starch, and lay on your Print as equally as poſſible, without letting any Bubbles or Bliſters appear in the Paper; but you muſt obſerve, that, when you lay on your paper upon the Cloth, as both the Cloth and the paper are then wet, however cloſe you lay the Paper to the Cloth, they will both together appear flagging, and unſtrained, yet, as ſoon as they are dry, all will be ſmooth, as either was at the firſt: Let them remain ſo in a dry warm Place for a Day or two, and then varniſh your Print, as before directed, with Glue made of *Iſthyocolla*, and then with the white Varniſh.

With this Varniſh you may mix up any Colour, that has been ground dry, upon a Marble, and paint with it upon any Figure you have drawn, or upon any Print you have paſted upon your work; but the varniſhed Colours ſhould be chiefly put upon the ſhady parts. To know what Colours are proper Shades to one another, ſee the Chapter for making of Crayons.

Varniſh made with Seed-Lacca.

Put a Quart of ſtrong Spirit into a large Glaſs veſſel, and put to it ſix Ounces of Seed-lacca; let theſe ſtand together two Days, ſhaking them often; then take a Jelly bag, or a Flannel bag made like what is called *Hippocrates*'s Sleeve, and paſs it through, letting the Liquor drop into a Receiver, and ſqueezing the Gums every now and then; when the Varniſh is almoſt out of the Bag, add more, and preſs it gently, till all is ſtrained, and the Dregs remain dry; [Take care you do not put

put this Drofs into the Fire, for fear you ſet your Houſe in a Flame] then put it in Bottles, and keep them cloſe ſtopt, ſetting it by till you perceive all the thick parts ſettled to the Bottom, which will be in three or four Days, then pour off the clear into a freſh Bottle, and 'twill be fit for Uſe.

As for the Varniſh made of Shell-lacca, 'tis not of any great Service, though often recommended, for it will not bear the Poliſh.

When you lay on your Varniſhes, take the following Method: If you varniſh Wood, let your Wood be very ſmooth, cloſe grained, free from Greaſe, and rubbed with Ruſhes.

2*dly*, Lay on your Colours as ſmooth as poſſible, and if the Varniſh has any Bliſters in it, take them off by a Poliſh with Ruſhes.

3*dly*, When you varniſh, keep your Work warm but not too hot.

4*thly*, In laying on of your Varniſh, begin in the middle, and ſtroke the Bruſh to the Outſide, then to another extreme Part, and ſo on till all is covered; for the Bruſh if you was to begin at the Edges would leave Blots there, and make the Work unequal.

5*thly*, In fine Works, uſe the fineſt Tripoli to poliſh; do not poliſh your Work at one Time, but, after the firſt poliſhing, let it dry two or three Days, and poliſh again for the laſt Time.

6*thly*, In the firſt poliſhing you muſt uſe a good deal of Tripoli, but in the next a very little will ſerve; waſh off your Tripoli with a Sponge and Water; dry your Varniſh with a dry Linnen rag, and clear your Work with Oil, Whiting, and Lamp-black.

SECT. X. *To take off the* Figure *from any Piece of* China-Ware, *though the Perſon has not been acquainted with Drawing.*

When you have any Figures to your liking upon any China diſh, Cup, Plate, or ſuch like, you muſt lay a Piece of oiled Paper over them, ſo as to hold the Piece ſteady, till you can trace out the Lines of the Figures; then

then lay the oiled Paper on a Paper blacked on one ſide, and the blacked Paper on a clean Paper; then trace the Lines with a Pen, or blunted Point of a Needle, till the Lines are all impreſſed on the white Paper, and draw them over with a black Lead pencil, and mark the Shades, where they ſeparate from the light Parts of the Colour, that ſo you may lay on your Colours as you ſee them painted on the China-ware; then cut out your Figures cloſe to the Out lines, and fix them upon your Ground of Whiting and Size, or Size with ground Chalk, with thick Gum arabick and Water, and, when they are quite dry, paint them, the lighter parts in water-colours, and the ſhady parts with Varniſh mixed with the darker Colours; when theſe are dry, waſh all over with the white Varniſh before a Fire, but not ſo hot as to make the Varniſh riſe in Bliſters; when the Varniſh is dry, lacker it again with the ſame Varniſh, and repeat it a third Time; then ſcrape ſome Tripoli very fine, and with a ſoft Rag, dipt in Water, take up a little of the Tripoli at a Time, and poliſh it, by gentle rubbing, till 'tis ſmooth, then waſh off the Tripoli with a ſoft Sponge and Water, and then with a dry fine Cloth, wipe off the Tripoli, and, when that is dry, clean it with Whiting and Oil, if it is a white Varniſh; or, with Oil and Lamp black, where the Varniſh is black.

But the common Way is to cut out Prints, and paſte them on ſuch Parts as we think fit, and then colour them with Water-colours, and varniſh them with white Varniſh. 'Tis an eaſy Way of Painting, becauſe the Shades of the Prints, when you lay on a tranſparent Water colour, will give the Light and Shade that Colour to your purpoſe, without uſing a dark and light Colour.

SECT. XI. *Some remarkable Directions in colouring of* Draughts *or* Prints *in Japanning, as Flowers, Birds, Fruits,* &c.

If you have Prints or Drawings in black and white of Flowers; if the Centre of the Flower is riſing, juſt touch

touch the Edges of the Lights with a thin Tincture of Gamboge, and lay on ſome Dutch pink, or Gall-ſtone, over the Shades, ſo as to run into the Lights a very little. I ſay this becauſe the Thrums in the middle of Flowers are generally Yellow, but if of any other Colour, as by Obſervation I find they are ſometimes blue, ſometimes more light, and ſometimes darker, then touch on the Verges of the Lights a little Ultramarine-blue, and over the Shades either ſome Sanders blue. to run a very little into the Ultramarine, or elſe ſhade with Indigo; and, ſome of the white of the Print being left void of Colour, will then give a Life and Spirit to the Colours ſo diſpoſed.

All Flowers ſhould be tenderly touched in the Lights, juſt to give a little Glare into the light Parts of the Colour you would give to the Flower-Leaves; and, if you have a natural Flower to paint by, you will preſently ſee that on the ſhady Side you muſt lay on the moſt ſhady part, ſuch a Colour as will force the reſt to appear forward; but do not dawb over the Shades with too heavy a Colour, let it be ſuch as may be tranſparent, if poſſible, and ſcumble it into the light Colour, which was laid on before; uſe your Pencil lightly on this Occaſion, with a very little Gum-water in it, and uſe it before the Colours are quite dry.

In the Painting of the Leaves of Herbs or Plants, we ought to have regard to the Colours of the Greens; the brighteſt is the Verdigreaſe green, deſcribed in *my former Book relating to Painting in Water-colours*; we ſhould touch that Colour a little into the light Parts of the Leaf, from the Place where the lighter Parts of the Shades end; and then lay on ſome Sap green on the ſhady Parts, ſo as to unite with the Verdigreaſe-green; and if the natural Leaf ſhould be of a darkiſh Colour, touch the lighter Sides of the Leaves with a little Verdigreaſe-green, and Dutch yellow Pink mixt together, or with a Tincture of French berries, but ſo as to let the Verdigreaſe ſhine more than the Pink, and by Degrees ſhade it with Pink.

The Leaving the Lights, when we colour a Print, has two Advantages, *viz.*

If we leave the Lights on this Occaſion, the whiteneſs of the Paper ſerves inſtead of the Uſe of white Paint, which is an heavy Colour, and would rather confound the Edges of the Colours, which I have preſcribed to be laid on, than do them any ſervice; but the Colours, which I have directed where there is no white laid on, will agreeably ſhine into the white of the Paper.

I am more particular in this, becauſe ſeveral, if they ſee a Flower of a blue Colour, will lay it all over with one Colour, though it is thick enough to hide both the Lights and the Shades, and then it remains like a penny Picture, where there is nothing to be ſeen but a Jargon of Reds, Blues, and Yellows.

With a little Practice of what I direct, you will ſoon ſee the good Effect of laying on Colours for this Uſe; though the dawbing of Prints in the common Manner may pleaſe the Ignorant, when every one of Taſte will ſoon diſcover the Impertinence.

In a Word, when you are about ſuch Pieces of Work, *ſcumble* the Lights into the Shades of every Colour, and ſave the Middle of the Lights open on the Papers, for, as the Paper is white of itſelf, it makes a Light.

CHAP. VIII.

To melt Amber, *and caſt it into any Figure with* Flies, *or any ſmall Animals in it, as we ſee in the valuable Pieces of* Amber *ſold at great Prices. From Mr.* Boyle.

TAKE Turpentine, and melt it in a Glaſs in a ſtrong Sand-heat, where the Fire may be raiſed at Diſcretion, then have prepared three Ounces of Amber, either

either of the whiteſt or yellow ſort ; [*If* you want your Amber white, pick out the cleareſt white pieces, or if yellow, the cleareſt of that ſort.] levigate either of them ; and when your Turpentine is melted, ſprinkle the powdered Amber in, keeping it ſtiring with a Piece of Firwood, till you find no Reſiſtance ; then, if you find your Melting to reſiſt the Stick, drop in by degrees a little Venice turpentine, and keep it ſtill ſtirring, till all your powdered Amber is diſſolved, and is thick enough to pour into Moulds ; and when 'tis cool, you will have a Figure, or the Medal you propoſe, filled with it, and remain as hard as Amber itſelf, with all the ſame Qualities that Amber commonly ſhew us.

Arts COMPANION

PART II.

OR THE

ART

OF

Drawing *and* Painting

IN

WATER-COLOURS,

WHEREBY

A Stranger to thoſe ARTS may be immediately render'd capable of Delineating any View or Proſpect with the utmoſt Exactneſs; of Colouring any Print or Drawing in the moſt beautiful Manner; and of taking off MEDALS inſtantly, by various Ways, never before made publick: Intermix'd with ſeveral curious Receipts for the Uſe of Painters, Statuaries, Founders, *&c.*

WITH

INSTRUCTIONS for making Tranſparent Colours of every Sort; partly from ſome curious Perſonages in *Holland*, *France* and *Italy*; but chiefly from a Manuſcript of the Great Mr. *Boyle*; particularly a Receipt of that Gentleman's, for making a Blue Colour equal to Ultramarine.

The FIFTH EDITION.

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PREFACE.

THE following Papers are the Effect of some Years Study and Labour, collected in my Travels, and at length put together, at the Instance of a noble Friend, for his Instruction in the Art of Drawing, and Painting in Water colours. *Among other Particulars which they contain, are several Receipts for making and preparing of Colours, from a Manuscript of the late famous Mr.* Boyle, *which has never yet appear'd in Publick, and was communicated to me by the late Lord* Carleton. *As I have experienc'd what is related in this Tract to be curious and extraordinary, I make no Apology for offering it to the View of the World: And on my own Part, I shall think my Time well spent, if my Readers reap any Delight or Advantage from what I here publish from my own Observation; since I can assure them, that it was calculated for the Entertainment and Diversion of those who have a Genius for such pleasant Amusements, as well as for the Improvement of those who have already made some Progress in the delightful Arts above-mentioned.*

THE

THE ART OF Drawing *and* Painting IN WATER-COLOURS.

CHAP. I.

Rules for Drawing any Object in its Outlines, as exact as the Life or Nature.

TAKE a Sheet of the thinneſt, or whiteſt brown Paper, and bruſh it over with Oil of Turpentine, which will immediately render it tranſparent, and then put the Paper to dry in the Air; when 'tis dry, ſtrain it upon a Frame, and fix it againſt any Object you deſign to draw; as an Houſe, or Hill, or Tree, *&c.* then juſt before it, place a piece of Wood with an Hole in it, fit for one Eye to look through; and as you meet any Out-lines of the Object you deſire, upon the tranſparent Paper trace them over with a Pencil; ſo will you be ſure that you cannot err; for there will be nothing but juſt Proportion, and a true Repreſentation of Nature.

To make this ſtill of more Elegancy, obſerve the Tracing of your Draughts where the Shades are, and mark them with your Pencil; for all the Art in the World can never diſpoſe the Shades ſo regularly as one

may touch by this Method: But the Shades muſt be done quickly after the Out lines are drawn, and not at different Times, becauſe every Inſtant the Sun changes them.

In this too obſerve, that in certain Objects you will have fainter, ſtronger, and yet more dark Shades, and in your Remarks of them take ſuch Memorandums, as may direct you how to finiſh them, with *Indian* Ink, or other Colour, when you ſit down to compleat your Work.

The beſt Way that I know, is to prepare three Shells or Gallipots of *Indian* Ink mix'd with common Water, before you attempt to trace out your Object, *viz.* one of a very faint Black, the next of a middling Black, and the other of an interſe Black, Number them 1, 2, 3, from the lighteſt to the darkeſt; and as you make your Obſervations of the Shades on your Object, mark upon your Draught the ſame Numbers as they happen to appear, ſo that afterwards you may finiſh with Certainty.

Again, it is neceſſary in the Drawing of any thing after this Manner, to obſerve, that the Lines on the ſhady Side ſhould be thick or bold, and thoſe on the lighter Sides ſhould be thinner or finer, in proportion to the Light that falls upon them. As for Example: In the darkeſt part a Line may be of this Thickneſs; ▮ in the next dark Part ſomewhat thinner ▮ and in the other thus unleſs in Things at a great ▮ Diſtance, hardly to be underſtood, or ſo faint ▮ as hardly to be perceived, thus; | a mere Shadow as it were.

Some have been guilty of a great Fault, though they have taken the Out lines very exact, to make all their Lines of an equal thickneſs.

If an Object be repreſented, we'll ſuppoſe two Miles off, and the Drawing be as ſtrong in that Part of the Picture, as if it was next the Eye, or not ten or twenty Feet from the Draughtſman, it would not appear pleaſant or natural to the Eye. We muſt not expreſs a Man with Buttons on his Coat at two Miles Diſtance, no more than we muſt have them ommitted in a Perſon ſo near the Eye as ten or twenty Feet: Though this has

inad-

inadvertently been done by ſome who have paſſed for great Men. And the Shades in thoſe diſtant Appearances muſt be in proportion to the Strength of the Objects, as they appear to us, *i. e.* imperfect. Three or four well-directed Touches of the Pencil, on the ſhady Side, will repreſent a Figure at the Diſtance we can diſcern it, as lively as ſome Hundreds will of the ſame Figure near the Eye.

But the tranſparent Paper I ſpeak of, is of another Uſe; for, if we lay it upon any Picture, or Print, in a looſe Sheet, you will ſee all the Lines through it, and may then draw or copy it with the greateſt Pleaſure. You will then, if the Print or Picture be done by a good Maſter, ſee which Lines are ſtrong, and which are tender and ſoft: Imitate them.

There is yet another Way to take Views and Landſcapes, which ſome prefer to the tranſparent Paper; that is, either with white or black Tiffany, or Lawn, ſtrain'd upon a Frame, and us'd in the ſame Manner as the Paper; excepting that the Black-lead Pencil is uſed to the Paper; on the white Tiffany, and on the Lawn, we uſe Charcoal finely poinied, and very ſoft; but on the black Tiffany we uſe white Chalk of the tendereſt ſort.

CHAP. II.

How to bring theſe Drawings to Uſe; and to copy from Prints, Paintings, &c.

IF we make a Drawing upon tranſparent Paper, to take a Drawing from it regularly, get a piece of Paper of the ſame Size, and rub on one ſide of it ſome Powder of Black lead, till 'tis well and equally black'd, and ſo well rubbed, that a touch of a Finger will hardly be tinged with it.

Then take the Drawing you have made, or Print, and lay the black'd Paper under it, with the black ſide downwards,

wards, upon a piece of white Paper, and pin the three together in two or three Places; take then a Pin or Needle a little blunt at the Point, and trace it over the Out-lines of your Picture; which, with a little preſſing, will direct the black'd Paper to impreſs the undermoſt white Paper, ſo as to receive every ſtroke you draw.

When this is done, you muſt with your Black-lead Pencil correct what Errors you find, and ſlightly clean the Draught new made with ſome ſtale Bread-Crumbs. The Black-lead Pencil is ſo hard to be found tolerable, that I know not above one Place. where we can get one that will do the Service we require. If we find a good piece of Lead in the beginning, when we have uſed an Inch or two, the reſt generally proves hard, gritty, and full of Knots.

The beſt I have met with are commonly ſold by Joyners, from ſome of theſe one may have them of ſoft or hard Lead, and uſe them till they are reduced to two or three Inches 'Tis a great pleaſure to a Draughtſman to work with a good Pencil, and as great a Plague to have a bad one.

So the Camel's Hair Bruſhes are generally very bad; they are indeed cheap enough to buy them in common; but if one would have the beſt, which ſhould be full of Hair, the Price ought to be accordingly, as they can be made to hold a Quantity of Colour, and be brought to fine Points: 'Tis better to give ſix-pence or a ſhilling for a Pencil, than to have a dozen for a groat.

As for the Draughts drawn on Tiffany or Lawn, lay them only on Paper, *i. e.* that which is drawn with Charcoal upon white Paper, and that drawn with Chalk on black or blue Paper; then, giving each of them a Knock or two with an Hammer, the Charcoal or the Chalk will fall through them, upon the Papers, directly in the Lines they were drawn, and give you the true Repreſentation of the Object you drew from the Life: Upon the black Paper you will ſee it in white Lines, and ſo the contrary.

Then

Then ſtrengthen theſe Shadows of Drawings with your Black lead Pencil, or Chalk, or red Oker, on the Sheets of Paper, where they have made the Marks; otherwiſe, the Lines would eaſily be rubbed out. But take care, as I have obſerved before, that this Amendment be made ſuddenly; for theſe tender Draughts are ſoon vaniſhed, if one does not take care to ſtrengthen them immediately: Begin firſt at the bottom of the Drawing.

Another Way is to take a thin piece of Paper, and hold it againſt a Glaſs-Window, principally at ſuch a Window as is ſaſh'd; for the Interruptions of the Lead in the ſmaller glazed Windows, will hinder part of this Proſpect; the Point is, draw what you ſee from the Glaſs, and then the Black-lead paper is to be uſed, as directed before.

There is another Way ſtill, which may be more eaſy to the Hand or Arm of a Perſon not accuſtomed to drawing upon a Paper or Lawn placed upright, which is by the Uſe of a portable *Camera-Oſcura*; though to help the firſt, one may hold a Baguette, or ſuch a Stick in the Left-hand, as the Oil painters uſe to reſt the Right-hand upon; or have ſome other Reſt made for the Right-hand, as may be ſcrewed up and down at one's pleaſure. But there is this Difference ſtill between drawing a piece of Perſpective, or View, on a tranſparent Paper or Lawn placed upright againſt any Object, that ſuch a piece will take in more of the View or Object, and from a greater Diſtance than the portable *Camera Oſcura* will. However, as the portable *Camera* will at firſt be moſt eaſy to the Arm for the Beginner, by Reaſon the Objects appear upon an Horizontal-plane, ſuch as a Table, the Hand will have a proper Reſt, and more readily follow the Lines repreſented on the Plane with that Exactneſs. Indeed ſuch a portable *Camera*, as I mention, is of ſome Expence, and to ſuch as can afford it, they may have them at any price, from thirty Shillings to five Pounds a piece, according as they beſpeak them, at the Mathematical Inſtrument-maker's.

What will make the Difference in the prices, will be the Largeneſs of the Sizes of the Glaſſes, which lye horizontally, and receive the Objects which we are to trace out with our Pencil: The ſmaller of theſe Glaſſes may be perhaps four Inches ſquare, and the larger fifteen Inches. On ſuch Glaſſes you will meet the exact Repreſentation (ſmaller or larger, according to the bigneſs of the Machines) of the Objects we point or direct them to, each one adorned with the natural Colours agreeable to the point of Diſtance; ſtronger nearer the Eye, and gradually declining, as the Objects are more remote from it: The Shades of the ſeveral Colours are in this Way expreſſed in a very lively Manner. A few Leſſons, with good Conſideration, will be of good Information, not only to a Beginner, but to a Maſter of the Pencil.

But ſtill, to advance the Knowledge and Uſe of this portable *Camera*, I ſuppoſe, that inſtead of the Glaſſes, which receive the Objects I ſpeak of, there ſhould be placed Frames of tranſparent paper, to receive the Objects we have a mind to take, upon which one may uſe the Pencil ſtill with greater Freedom. One may have a Dozen or two with each *Camera*; or one Frame will ſerve as for many papers as we pleaſe to ſtrain upon it, if one has patience to paſte them on.

There is another way of drawing Objects in the *Camera Oſcura* way, which is by making a Room as dark as may be, only leaving an Hole in one of the Window-ſhutters, as low as poſſible, to receive an Ox-Eye Glaſs, as they call it, which is ſold by the Mathematical Inſtrument-makers. This turns in a Socket, ſo as to direct every Object, within a certain Reach, to a Sheet of paper, placed at a proper diſtance within the Room, to receive thoſe Objects; upon which paper, you may draw them in great perfection; but they all appear revers'd, or the wrong End upwards: However, they are in as exact proportion and beauty, as thoſe repreſented in the former. In this Caſe, 'tis not however more difficult to draw, or rather copy the Objects, though they are revers'd, than to draw or copy the ſeveral Things which we ſee upright, on the Frames of tranſparent Paper, Lawn, or Tiffany; for to trace Lines, will be as eaſily done

done one way as the other: And though the Objects, falling on the Sheet of paper, will, when we are drawing them, be revers'd, 'tis but turning the Sheet of paper upside down when they are done, and our Drawing will be right to the Eye.

When we shew this by way of Curiosity, to those who are unacquainted with the Reasons why the Images represented on the Sheet of paper appear upside down, it would not have so desirable an Effect, as if they could be viewed in their natural Situation: But to obviate this Difficulty, let the Sheet of Paper, which is to receive the Objects, be placed against the back of a Chair, and let them look on the several Objects, represented on the Paper, over the back of the Chair, which will set them upright to the Eye. This way in bringing them to rights, is thought on by very few, though at the first Proof every one will wonder that he did not find it out sooner.

Thus far is shewed, how any one may copy either a Print, Drawing, or piece of Painting, or even make an exact Representation from the Life. But I must yet add, concerning the Taking off of Prints or Drawings, a Method or two which are easy and diverting, not before mentioned. One is, prick with a Pin any Outlines of a Print or Drawing one has a mind to copy, and then, laying the said Picture on a Sheet of paper, take a Powder-puff, or a Tuft of Cotton, dipping it now and then in Charcoal-dust, or red Chalk-dust, and beat it over the prick'd Lines, through the picture, renewing it with Dust frequently by dipping, and then you will have full Directions marked on your Cloth, or Paper, sufficient to finish a just Drawing.

N. B. Such a prick'd piece of Work will give many hundred Proofs of its Use. Though it spoil the print or picture, it saves a vast deal of Trouble to the Painter on the drawing part.

Another way there is to make an Impression from the print, which shall give a just Copy of it: This is of great Use, when we want to carry every Stroke of the Engraver along with us. It will indeed sully the print a little, though very little, if you are careful; and this Method

will

will perhaps coſt you two minutes Time, when the drawing of it with every Stroke the Engraver has made, would keep you buſy a Month.

For this take ſome ſoft Soap, either white, or of the green ſort; but, for my part, I always uſed the green Soap; mix this with Water near an equal Quantity, till 'tis near the Conſiſtence of a Jelly: Rub ſome of this mixture on the print, and gently wet the paper, you would have to receive the Impreſſion from it, with a wet Spunge; then lay it on the print, and cover all with two or three other pieces of dry paper, and rub it very hard all over with any Thing that is ſmooth and poliſhed, and the wetted paper will have upon it the reverſe of the print you rubbed it upon, with every diſtinct Line in the Original, if you have been careful to rub it equally.

CHAP. III.

Secrets for Copying of Drawings, &c. continued.

To take a Drawing with fixt Ink.

ONE Way is to take a thin Sheet of paper, and rub it all over with freſh Butter, as equally as poſſible; then dry it well by the Fire and rub the butter'd Side with Carmine, till 'tis all equally colour'd, or elſe rub it over with Lamp black, or Black-lead powder, or with blue Biſe finely ground; take care in the rubbing on any of theſe that the Colour will not come off by a very ſlight Touch of the Finger, and they are then fit for your work.

When you have choſen a Print, or Deſign, that you would copy, lay the colour'd Side of your butter'd paper upon a piece of clean paper, and your print upon the butter'd paper, and then with a fine Pen or Needle, blunted

blunted a very little at the point, trace the Out-lines of your Drawing carefully, and you will have a good Copy of it upon your white paper, which may be touched up afterwards by Crayons of the like Colour.

A red Ink for making an Impreſſion of a Print.

One may likewiſe uſe the following Method for taking off or making a Copy from any print; which is, to mix ſome Vermillion, finely ground, with Linſeed oyl, but ſo liquid that it will run or flow in a pen; with this trace the Lines of your print, and as ſoon as all is done, then with a Spunge and Water wet the backſide of the print, and turn the printed ſide down on a piece of white paper, ſo as to lye ſmooth; then lay over that a piece of dry paper, and preſs it hard in every part, and the lower white paper will receive the Impreſſion: But if you have a Linnen-preſs, 'tis better to put your papers between two of the wooden Leaves, and ſkrew the preſs as tight as may be, for you will then have a fine Impreſſion.

Taking Draughts with red looſe Ink.

You may likewiſe take ſome Vermillion finely ground, and mix it with fair Water in a Gallipot, with ſome Cotton, and it will run very freely in the Pen, ſo that one may make the fineſt ſtrokes we deſire; then, with this mixture draw over all the ſtrokes of your print, imitating both the finer and ſtronger Lines: When all is done, then with a Spunge dipt in Gum-water, with a clean white Paper, and while it is wet, turn the Print upon it, and preſſing it well, take off the print, and all the Strokes will remain on the clean Paper, and as ſoon as 'tis dry the Vermillion will be fixt to it.

This ſort of Ink is what a famous Writing-maſter uſed, when he had a Book of Writing engraving for him; he writ with this, and, having his Copper-plate covered with white Bees-wax, or white Ground, he turn'd the written ſide down on the waxt ſide of the plate, and rubbing it very equally, the Impreſſion will be upon the Wax.

Taking Draughts with blue loose Ink.

You may likewiſe make ſuch a ſort of Ink of blu Bice and common Water, which will run very finely in a Pen, and ſerve for the ſame Uſe as the above Ink.

To take off a Drawing in a ſtanding red Colour by Tracing.

Take Vermillion finely ground, and mix it with a little freſh Butter, then rub a clean Sheet of Paper with it on one ſide, till it will bear a ſlight Touch of the Finger, without leaving the Paper too freely; then uſe this coloured Paper, by laying the colour'd ſide upon a clean Paper; and upon the colour'd Paper lay on your Print, and trace every Line you think proper, as directed before in Tracing; but be ſure you pin the three Papers together at the Corners to prevent their ſlipping; for if any one ſhould ſlip, your work will be ſpoil'd, or ſome one or other may inadvertently take up the Print when you have half traced it, and then 'tis impoſſible you can ever place it right again; ſo that your Labour will be all loſt. This Impreſſion made by Tracing will hold without rubbing. In Tracing, the Quills taken from a Swallow's Wing are very good, after they are thoroughly dry.

If one has Carmine enough by one, he might mix it with a little freſh Butter, and colour a Paper with it as before directed, and then your Drawing will be of a more beautiful Colour; or, if we would have the Drawing blue, we may colour a Paper with blue Bice and Butter.

A ſpeedy Way of Printing the Leaf of any Tree or Herb, as exact as Nature it ſelf.

Take the Leaf of any Plant you deſire, and rub the Veins on the Back-ſide a little, with a piece of Ivory, or a Dog's Tooth, to bruiſe them a little, then rub it gently with a piece of Woollen, Cloth dipt ſlightly in Oyl of Linſeed; when you have done this every where on your Leaf, put the oyl'd ſide on a piece of white Paper, and preſſing it equally in every part, the Paper will remain a perfect Impreſſion of it, which may be afterwards coloured; 'tis ſoon done, and is uſeful to ſuch as would remember Plants.

Another

Another Way of Printing the Leaves of Plants, ſo that the Impreſſion ſhall appear as black as if it had been done in a Printing preſs.

Take any Leaf, and when there is no Wet upon it, take ſuch a Ball as they uſe at the Printers for laying the Ink upon the Letters; and when your Ball is equally covered with Printer's Ink, ſtrike it gently four or five times on the back of the Leaf, till all the Veins are black'd with the Ink; then lay your Leaf on a Trencher or ſmall Board, with the black ſide upwards, and then wet a piece of white Paper to be ſomewhat more than moiſt, and lay it on your Leaf, and upon that lay a ſmooth Trencher, preſſing it very hard, but not ſo much as to break the fine Fibres of the Leaf; by this Means you will have a fine Impreſſion.

But it would be ſtill more eaſily done, if you could get a piece of Wood, made like a Cylinder, about a Foot long, and at Inch and a half Diameter, and cover the middle part of it about ſix or eight Inches long, with Woollen-cloth rolled three or four times about.

With this Roller roll the white Paper that lyes upon your Leaf backwards and forwards four or five times, and you will have a very curious Impreſſion.

The Neceſſaries for this Work are a Gallypot of Printers Ink, a couple of ſmall Balls, ſuch as the Printers uſe, to lay the Ink equally on the Leaf, and the Roller I mention. But where printers Ink cannot be got, then take the following Method.

To take the Impreſſion of any Leaf, as certain as the former Way, only uſing ſuch Things as may be had in any part of England.

When you have no Printers Ink, rub the back of a Leaf, as before mentioned, with *Linſeed oyl burnt*, and then, ſtrewing ſome Powder of black Lead, or for want of that, ſome Charcoal or Small coal Duſt, or the Powder of burnt Cork, equally, upon a ſmooth Board juſt to cover it, ſtroke it over ſmoothly with the Blade of a Knife

CHAP. IV.

Of Taking-off Medals inſtantly, by various Ways not known.

IT may be uſeful to ſome People to learn another Way of preſerving to themſelves good Specimens, and fine Deſigns of Medals, that is, ſuch as may ſerve to draw from at any time; and many thouſands of theſe Specimens may be taken in one Day, at a trifling Expence.

One Method is, to take Ichthyocolla, *i, e.* Iſinglaſs, which is ſold at the Druggiſts, and is call'd likewiſe Fiſh-glue; it is made up in Rolls twiſted in the Form of a Figure of eight. This being broken to pieces, take about an Ounce, and diſſolve it in Water enough to cover it, over the Fire, ſtirring it gently till all is diſſolved; then, with a Camel's Hair bruſh, ſtroke ſome of this Glue over the Medals you want to take off; after the Medals are laid as horizontally as poſſible, and when all the Surface is cover'd, let them lie till the Glue is harden'd; and then with the point of a fine Needle, or Pin, raiſe the Edge of the Glue from each Medal, and the whole Impreſſion in Glue will fly off as hard as Horn, with all the fine Sharpneſs of the Medal, as if it was ſtruck. This Glue may be made of any Colour we pleaſe, by mixing the Colour we want in the Water we melt the Glue in. Five hundred of theſe Impreſſions in Glue will not weigh above half an Ounce, if each Medal be an Inch Diameter. Theſe muſt be dry'd immediately, not in an hot Sun, nor in a damp place, but regularly.

If we uſe the Iſinglaſs without any Colour mix'd with the Water, we may, when we take our Copies from the Medals, breathe gently on the concave ſide of them, which in ſome meaſure will moiſten our Medal, and then lay it upon a piece of the thickeſt Sort of Leaf-gold, which will ſtick to it, and, by ſhining through the Iſinglaſs, will appear like a Gold Medal; and if we

would

would imitate a Copper Medal, we ſhould mix Carmine with the Water we diſſolve our Iſinglaſs in.

When I preſcribe Water for this End, it is becauſe it will do well, and may be had any where; but Brandy, or Spirits of Wine, will give Glue a much greater Strength, ſo as to be leſs ſubject to ſoften by damp Air. When I mention this, 'tis from an Experiment I made for Preſerving the natural Colour of Flowers ſeveral Years, which may be uſeful to the Curious, who uſe this Glue on any Occaaſion, and is as follows.

To preſerve the Leaves of Tulips. Make ſome Card-paper into the Figure of Dripping-pans, and, with a ſtrong mixture of Gum Arabick and water, fix them to the Card; then pour on gently warm ſome of the Iſinglaſs prepared with Brandy, or Spirits, 'till the Leaf is quite cover'd, and in an Hour or two the Liquor will become hard, and, by keeping the Air from the Flower, will preſerve it in all its Colours for ſeveral Years. The ſame may be done with the Bloſſoms of the Auricula, which will preſerve all their Colours as if they were painted.

I Shall now mention the manner of taking off Medals of the largeſt ſort, which will ſtill preſerve to us the Delineations of many curious pieces, and valuable deſigns. For this Uſe, with a Tuft of fine Cotton a little greaſed with Sallad oyl, rub the Medals gently over, and melt ſome Stone Brimſtone, enough to cover the Medal half an Inch thick; then put an Hoop of ſtiff Paper round the Edge of the Medal, and when the Brimſtone is melted, and not too hot, pour it on the Medal, and as ſoon as it is fixed and hardened, if you untie the Hoop, the Impreſſion on the Brimſtone comes clean from the Medal; which will produce a ſharp and correct mould to caſt another from in Plaiſter of *Paris*. But this ſhould not be uſed on Silver Medals, becauſe it will change their Colour.

If the Medals are Silver, uſe the ſame method of binding them round with Paper; and oyling them; mix a little Plaiſter of *Paris* with Water, and fill the Hoop with it, then immediately fill the Caſe in a ſprinkling manner with the ſame Plaiſter till it hardens; and when it is dry take it from the Medal.

But

But from the Moulds caſt in Brimſtone, which are concave, we again caſt ſuch Medals in Plaiſter of *Paris* as are convex, oyling the Mould as before, and uſing the Plaiſter of *Paris* as above directed; ſo you may take off any Medal, or fine *Baſs-relief*, with a great deal of Exactneſs, even ſo as to form Medals from them in any ſort of Metal. But there is no one that I know ſo curious in the Management of this Affair, as Mr *Pingo*, in *New Stree Square*, near *Shoe Lane*, *London*.

There is a method of taking off Impreſſions in Plaiſter of *Paris* from Copper-plates, by oyling in a minúte Degree the Plates, and then binding them about either with Card-paper, or other Paſte board, and pouring on ſome of the fineſt Plaiſter of *Paris* and Water you can get, and finiſhing the Work with Plaiſter, till it becomes dry, and hardens; you will then have a fine Impreſſion, if one may ſo call it, of the Lines of the Plate, in the Plaiſter, which will ſerve to draw from, when you have occaſion.

We may add ſtill the manner of taking off any fine Engravings from the Tops of Snuff Boxes, or Watch-caſes, which is only holding them over the Smoak of a Candle, till they are quite black; then wipe off the black with the ſoft part of the Palm of the Hand, and lay on the Engraving a piece of white Paper a little wetted with a Spunge, and over that a thin piece of Flannel, or a piece of brown Paper held hard down over the engraved part, and being hard rubb'd, the Paper next the Picture will receive a fine Impreſſion, as if it had been paſs'd through a Rolling-preſs.

We may yet recommend another method of taking off Medals in great perfection, which is by getting thin pieces of Lead, and placing the Medal horizontally on the top of a firm poſt, or any ſteady place; lay over the Lead a flat piece of harder Metal, and over that place a piece of a round turn'd ſtick, ſuch as is uſed in the Staff of a Broom, ſawn off above five or ſix Inches in length, and, holding that tight with your left hand on the lead and flat piece of metal, ſtrike the top of the ſtick a ſmart blow with a large Hammer, and the Lead will be perfectly impreſs'd with the Image of the Medal;

Medal; this Blow muſt be done at once, to render the Impreſſion perfect: Even this may be done on any Impreſſion made on Sealing-wax.

We may likewiſe take off a Medal, by laying over it a piece of thin Sheet Block-tin, otherwiſe called *Foyle*, which is ſold at the ſame places where the Plaiſter of *Paris* is to be had, or at ſome Pewterers Shops, and rubbing it hard upon the Medal, it will give us a very good Likeneſs of whatever medal we rub it upon. The Block-tin Sheet I mean, is ſuch as is laid on the Backs of Glaſſes, when they are to be ſilver'd, to render them Looking-glaſs.

We may alſo take Impreſſions from Medals with Putty, ſuch as the Glaziers uſe, although the Medals or *Baſs-reliefs* are under-wrought.

Another Way of taking off Medals is to provide the Scraps or Shavings of white Paper, which you may have at the Book binders; you muſt boil them well in common Water till they are tender, then bruiſe them well in a Mortar till they come like a Paſte, and boil them again in Spring-water, with a little Gum-Arabick; and, letting this mixture ſettle a while, pour the Water from it through a Sieve or Linnen-cloth, and what remains is extraordinary good, to either preſs into any mould, or upon any Medal, and when the Paſte is dry it will come off very ſharp.

Some medals that are under-wrought cannot be taken off this Way; therefore in ſuch Caſes, we muſt take common Glue with Water, melt it, and when we have fixt a Hoop of Paſte-board round the Edge of our medal, pour on the Glue hot, having firſt oyl'd the medal with a lump of greaſy Cotton.

When the Glue is dry and hard, we muſt take off the Hoop, and the Glue will fly from the Edges of the Medal; and it will then eaſily come off, being ſubject to bend and give way, which the other Things before mentioned will not do We ſhould mind to make our Glue ſtrong enough, and pour it on one third of an Inch thick.

When we have taken the Impreſſion by this means, we muſt hoop round our mould of Glue with Card-paper

or

or Paſte-board, as before; and oyl it, ſo that no Bubbles or bliſters may be ſeen, that is to ſay, juſt make it greaſy; then we may caſt ſome Plaiſter of *Paris* in it, and we ſhall have a good Copy of the Medal: When this is dry the Glue will fly off, or may be broken off, and we ſhall have a good Pattern to caſt from.

We may likewiſe make a Putty of Linſeed-oyl and fine ground Starch, which, being well workt together into a paſte, will take a good Impreſſion from any medal. This is much better than the common Putty.

When we have theſe Moulds, we may caſt in them good Medals in Bees-wax; but they will come off much ſharper if the mould be in Brimſtone, than if it be in Plaiſter of *Paris*: But when we do this, our Wax ſhould be as well blanch'd or whiten'd, as one would uſe for Wax candles; it is however neceſſary to greaſe the mould before we pour in our Wax, as I have directed before.

However, tho' I recommend white Wax as preferrable to the other, I would not chuſe to have the copy of the medal white; for the darker Colours ſhew the Figures much better.

If we would have our Copy of a red Colour, we muſt mix Vermillion with our Wax when 'tis melting; or if blue, put into our melted Wax ſome Stone-blue well beaten or ground.

As ſoon as our Wax Medals are cold enough to take off, we ſhould lay ſome Leaf gold upon them, and with a piece of Cotton preſs it down gently, without rubbing it backwards or forwards, and that will gild our Medal.

When we have caſt medals in Plaiſter of *Paris*, to make them look like ſteel or metal, we muſt rub them over with a piece of cotton dipt ſlightly in Oyl, and then put on them ſome powder of black Lead, and rub them well with a Bruſh, ſuch as is us'd for the Teeth, 'till the whole is equally cover'd; and they will have a fine Gloſs upon them.

But we may make the Plaiſter of *Paris* medals of the Colour of Box, by boiling them in Linſeed Oyl; and

it

ſt will harden them, ſo as to bear the Bruſh to be clean'd if any duſt gets at them.

If we would have our Plaiſter of *Paris* medals of a yellow or golden Colour, we muſt take a little Pearl aſh, and boil it in a Pint of Water, 'till it makes a ſtrong Lixivium; then put in about half a quarter of a pint of *French* Berries, and boil them till the Liquor is of a very ſtrong yellow, and uſe this Liquor with our Plaiſter of *Paris* inſtead of common Water.

If we would have our Plaiſter of *Paris* Medals be of a blue Colour, we muſt boil ſome Lacmus or Litmus in River-water; 'till the Water is as blue as we think proper; and muſt uſe this Water with our Plaiſter, when we caſt a medal, to render it of a fine Colour.

If we would have our plaiſter medals of a red Colour, we ſhould boil a little Raſpings of Braſil-wood in pale ſtale Beer, and, when it is ſtrain'd off, uſe it as common Water with the Plaiſter.

I Have not yet try'd, whether the fine tranſparent Gum made of Verdegreaſe will mix with plaiſter of *Paris*, but I have good reaſon to judge that it will; and, as it is cheap enough, I ſuppoſe it would not be unworthy any one's Tryal.

I Have often thought, that by theſe means one might eaſily collect a ſet of all the Coins of our Nation, and to diſtribute them as one ſhould, in the ſeveral Kings Reigns, they would make no diſagreeable Furniture, being plac'd in proper Order; the Gold by themſelves of each King's Reign, with his Figure and the Reverſe by one another, and under it the Value of the Coin; then the Silver in their proper Order; and the Braſs, or Copper, or Pewter, (for ſuch we have had) and even the Leather Coins ſhould not eſcape our Notice.

Or, to improve this, if we had Time to ſpare and good Opportunity, we might have the Reſemblance of the Coins of every Country; and by writing the Value of each of them, ſuch a Collection would be of uſe to Travellers, as well as to Hiſtorians.

The eaſieſt Way of doing this would be with the Ichthyocolla or Fiſh-glue; and ſo for the Gold Coins uſe Leaf gold, as before directed; for the Silver, Leaf-

ſilver; and for the Copper, Leaf copper, which is made in *Germany*: Or elſe for Silver we ſhould make our Medals with *Foyle*, as before directed; and for the Leather Coins mix a little Fullers Earth with the Water or Spirit, before we melt the Fiſh-glue or Iſinglaſs in it.

So far I have given Inſtructions how we may either make Drawings from the Life, or coppy whatever we think proper from Prints, Paintings, Medals, *&c.* tho' we knew nothing of Drawing before.

CHAP. V.

Of Colours for illuminating of Prints in the beſt Manner; or of Painting in Water-Colours.

COLOURS are to be diſtinguiſhed in the following Manner; we muſt firſt take White, the next Yellow, the next Orange, and then proceed to the Red, after that the Purple, then to the Blue, and after that to the Black. Obſerve, White and Black are the Extremes of Colour; then in the next place, Yellow is the leſſer point of Colour towards the White, and the next to that is the Green, and after that the Blue. I ſpeak of this, becauſe every one who has a mind to know the manner of Colouring of Prints, or painting in Miniature may profit by it.

I Shall begin then with regard to Colouring of Prints. If the Paper be pure white, uſe no Colour upon it, unleſs in the ſhaded parts; and then in painting of Flowers, if they tend towards a reddiſh Colour, uſe a faint Colour of Carmine with Gum water, upon the Shades only; if blueiſh, uſe a little faint Indigo in Gum-water, ſlightly paſs'd over the Shades, eaſily touching upon the Lights; where there is a yellow Tinge, either uſe a faint Tincture of Gamboge, or of *French* Berries,

Berries, which will be deſcribed among the Yellows; or if the White have a purpliſh caſt, uſe a thin lake on the ſhady ſide, ſuffering the Colour only to ſhine a little into the Light, it will give a Luſtre to the Whites; and if a greeniſh caſt ſhould be there, uſe either a faint Colour hardly to be diſcern'd, of the ſap Green, or in proportion, of the ſap Green mix'd with the Verdegreaſe Green.

N. B. All theſe Colours mention'd to ſhade the Whites, may be found in the following Directions.

CHAP. VI.

Of Whites *for Painting in Miniature.*

THE beſt White that is pretended to be ſold in the Water-colour manner, is the Flake-white, which is better than the White-lead ground: This, if it is pure, far exceeds the White lead in Beauty; for the White-lead is apt to turn blackiſh, eſpecially if you uſe it with hard Water.

But the beſt White that I know, is made of Pearl, or the finer parts of Oyſter-ſhells, made into an impalpable Powder, that is, ſo ſoft as to feel like Grounds of Starch, or Powder for the Hair, when we touch it with the Fingers; this is called by ſome of the Colour men Pearl-white, but 'tis hard to be found. If we have occaſion to uſe it, this White will mix well with any Colour; but if we uſe White-lead, let it be firſt rectified with white Wine Vinegar, which will cauſe a Fermentation, and ſoon make the white ſettle; then pour off the Vinegar, and waſh it with common Water; that is, put the Powder into a Glaſs of Water, ſtir it about, and preſently pour off the Water, while it is white, into ſome clean Receiver; and when the white parts are ſettled, pour off the Water from thence, and they will be extremely fine. I mention this, that every one may make their Colours of the fineſt ſort. It may be perhaps a little Trouble; but who would not uſe

ſuch

ſuch pains to be ſuperior to any thing that has been done before in the ſame Way?

When the White we ſpeak of is ſettled, add to it as much Gum-water as is neceſſary to bind it, or give it a Glaze; but take Notice that I would not have any white uſed in colouring of Prints, but only with dry Colours, when we paint in Miniature.

It is remarkable that White lead will change black, if the Water we uſe with it comes from Iron or Clay: When I ſay black, I mean that in a Month or two you will find the places where it lies the thickeſt, tinged with black, and when 'tis mix'd with any other Colour, it will ſoon change, or alter it.

For this reaſon, I have try'd divers ſorts of White; among others, the Powder of Egg-ſhells, of the brighteſt Colour, and well clean'd and waſh'd, is very good to be ground with Gum-water, or elſe put about a twentieth part of clear white Sugar candied to grind with it in Water; reduce this as fine as poſſible, that is to the ſtate of what we call an impalpable Powder, and uſe it. A Gentleman, whom I have given this Receipt to, tells me, that it is ſtill more to the purpoſe to pour it on ſome rectify'd Spirits of Wine, which, he ſays, will clear it from the Droſs; but I have not try'd the Experiment: I ſuppoſe, that when the Spirit of Wine has done its Work, it muſt be pour'd off, and then the parts left behind muſt be mix'd with Gum-water again; but that Egg ſhell powder is of great Service as a white in Water-colours, I know very well; and that alſo itſelf, and Oyſter-ſhell powder, well rectify'd and mix'd with the White of an Egg well beaten, will make an extraordinary Mixture with other Colours, and correct them from changing or altering their Qualities.

While I am ſpeaking of white for illuminating of Prints, as I have already obſerv'd, that the clear white of the Paper is proper to be left uncolour'd; ſo if it happens, that the Paper is given to *ſink*, as it is call'd, or to ſpread any Water colour we lay upon it more than is neceſſary, then the Way to correct it is as follows; We muſt fix the Paper in ſuch a Station, as may only

receive the Colour we lay on to glaze juſt as far as we deſign'd it; then take ſome Starch boil'd and prepared in Water, of a middle ſtrength, and with a large Painting-bruſt ſtroke it over the back of the Print, and, when it is well dry'd in the Air or Sun, put the Print in a Book, with a Weight upon it, to rectify the Crumplings which it may receive by wetting of it; ſo will any Print be made to receive Water-colours as one would have them be diſtributed, and none of them will then run farther than we intended.

There is an Earth brought ſometimes from *China* of a very ſoft Nature, and very white, which I find is better in Water-colours than any of the reſt; but 'tis very ſcarce.

CHAP. VII.

Of YELLOWS.

THERE are ſome Objects which have the Appearance of Gold ſhining through the Colour of Green, Red, or Blue; ſuch as ſome ſort of Flies and Beetles, and ſuch as the Cantharides, which laſt ſort every one may buy at the Druggiſts. This Gold Tranſparency is very well imitated, by laying on the Drawing ſome Leaf-gold on the ſhaded part, a little giving in to the light ſide of the print; the Way of laying on of Leaf-gold, is to waſh the part where the Gold is to be with ſtrong Gum water, and ſoon after that put the Gold on as ſmooth and even as poſſible, preſſing it down cloſe with Cotton: But take care that, when you lay on the Gum-water, you do not exceed the Limits you would have the Gold appear to ſhine. In this Caſe the Gold is only to ſhine through the tranſparant Colour, which is to be laid upon it.

Now it muſt be underſtood, that the Leaf-gold will not regularly receive Water-colours; ſo that, to render it ſubſervient to our purpoſe, we muſt, with a little thin

thin Liquor of Ox gall in a painting bruſh of Camel's Hair, ſtroke it over, and then it will receive any Colour we have a mind to paint upon it, and hold it. So you may have Gold Greens, Gold Reds, and Purples, Blues, or what you pleaſe. The Greens may be, firſt the Verdigreaſe Green, which I ſhall deſcribe hereafter; or the Sap Green, or Lake, or Carmine, if they are good; or for Purples, Lake and fine Indigo, or Carmine and Indigo; and for the Blues, Indigo on the dark ſide, and on the light ſide a little ſtroke of Ultramarine Blue, juſt to ſhine into the Light, and it will have a wonderful Effect.

N. B. One may find upon Roſe-trees in *June* and *July*, a Beetle of a green Gold-colour, which will ſerve to govern this kind of Painting. As for Gold of itſelf, I would not adviſe it to be uſed, unleſs we poliſh it, and then you may take the following method.

We ſee in many Manuſcripts fine Gold Letters, which riſe above the Surface of the Volume or Paper; theſe have raiſed the Admiration of the Curious, and the manner of making them is but little known; the Compoſition, which raiſes them above the Paper, is made, as I am well inform'd of Vermillion and the white of an Egg, whisk'd or beaten up to that Conſiſtence, as is call'd an Oyl, work'd together like a kind of Paſte, and with a Stamp fix'd to the Paper with Gum-Arabick; on this Figure of a Letter waſh, with a Camel's Hair Pencil, ſome ſtrong Gumwater, taking care that the Gum does not reach more than the Out-lines; then lay on the Leaf-gold cloſe with ſome Cotton; and as ſoon as it is dry, rub it with ſome dry Cotton, and then poliſh it with a Dog's Tooth; this will make it appear as if it was really caſt in Gold.

There is yet another Way of working theſe Things in Gold; and that is, by uſing the Gold which is prepar'd in Shells, but it muſt be pure Gold, and not ſuch as is brought from ſome places in *Germany*, which will change Green in a few Days time.

Before you uſe this Gold, cover the ſhady parts with Vermillion; and then, after your Gold is well rectified with Spirits of Wine, lay it on with Gum-water, which will

will mix with it very well, and when it is dry, poliſh it with a Dog's Tooth. I chuſe when I lay on this Powder gold, to leave the Lights vacant of it, and it makes a much brighter Appearance, than if one was to cover the Object all over.

But if one was to cover by Accident the whole piece with Gold, there is no better way to ſet it off, than by tracing over the ſhady parts with Gall-ſtones; or, which is much preferable, the Yellow, which I ſhall give the Compoſition of below, made of *French* Berries, I mean that which is the deepeſt in Colour; a little Minium brightens it very much; but ſee how I rectify the Minium, amongſt the REDS, and poliſh the Gold before you uſe any Minium to it.

Since I have mention'd Gold, I am next to ſpeak of the Yellows, as they fall gradually in their courſe of ſtrength.

The firſt is a kind of Straw colour, and is made of Flower of Brimſtone, which in itſelf is fine enough to mix with Gum-water; and the manner of preparing Gum-water, ſince I have not yet mention'd it, I ſhall inſert at the end of this Treatiſe of Colours.

A Common way of illuminating of prints, is by giving the Tincture of Gamboge for a Yellow; and this may be of two or three ſorts, either fainter or ſtronger; the laſt to be a ſhade to the firſt, and that to be ſhaded with the preparation of *French* Berries, which I ſhall preſently mention,

The great Mr. *Boyle* has left ſome papers behind him that were never publiſh'd, which my Lord *Carleton* gave me, and I ſhall inſert occaſionally in this Treatiſe. With regard to yellow Colours, he ſays, that if the Roots of Barberries are cut, and put in a Lixivium made ſtrong with Water and Pearl aſhes, there will be a fine yellow Colour produced from it; which I have tried, and ſucceeds very well.

Another Way Mr. *Boyle* propoſes, to make a tranſparent Yellow, which is, to take the Root of the Mulberry, which affords a very yellowiſh Juice, to waſh it well from the Earth in common Water, and boil it in the Lixivium I ſpeak of, made with Pearl aſhes and

Water; from this we may take out a ſtrong Tincture, much deepper than the former; but the Roots of the Mulberries are much harder to be had than thoſe of the Barberries; for Mulberry-trees are very ſcarce, and the Barberries are in almoſt every Hedge in *Eſſex*, about *Littlebury* eſpecially.

With regard to the Barberry-root, I think it would be worth while to plant them on purpoſe, for the Advantage that one might make from them by Dying; the Fruit, in my Opinion, being of little Signification, but the Root and the Wood, I think, will nearly anſwer the ſame End, in producing a fine Yellow.

Yellow Oker will make another good pale Yellow; but, for illuminating of Prints, it is a Colour rather of too much body; however, being well ground with Gum-water, it is of uſe after it has been well waſh'd.

Another good Yellow may be made from the plant call'd Celandine, infuſing it in Water, and preſſing it gently, and then boiling the Liquor with a little Allum; this Yellow will be a little inclining to Green.

But the Yellow which I like the beſt, and may be uſed in ſeveral Capacities of Lights and Strength, is that made of *French* Berries, prepared as follows.

Take of *French* Berries an Ounce whole, and boil them in a Pint of the Lixivium made of Pearl aſhes and Water, till the Liquor will give a fine Tinge of Yellow to a bit of Paper dipp'd in it; then pour it off from the Berries, and when 'tis cool, put it in a Bott'e for Uſe. But if we only put *French* Berries to infuſe in common Water, they will produce a good Yellow, but then it will not be durable.

Then again, add half a Pint of the ſame Lixivium to the Berries, and half an Ounce of freſh Berries, and boil them, 'till the Liquor is as deep as Gall-ſtone; which will ſerve to ſhade all the Yellows you can uſe of any ſort. You may boil this even to produce a brown Colour; and with a little Ox gall, it will ſerve to ſhade any Leaf-gold that has been laid on Paper, as directed before, and is much preferable to Gall-ſtone in imitating

any

any Gold-colour. It anſwers well upon a Tincture of Gamboge, or any of the former Yellows.

Next to this is the Tincture of Saffron, which, with common Water only, affords a bright reddiſh Yellow, ſuch as one would have (to cover the ſhadow'd parts of a Print) for an Orange or *bel'd* * Gold-colour; however, there is nothing more high, when we uſe Saffron, than when we infuſe it in reſtified Spirits of Wine; but then the Colour flies, unleſs we load it with Gum-Arabick, as I have try'd.

As for a deep Yellow with a body, *Dutch* Pink comes the neareſt to the aforeſaid ſtrong Yellow made of *French* Berries, in point of Colour; and of a lighter Yellow is the *Engliſh* Pink, which is ſtill made of *French* Berries, and in a body likewiſe.

I Cannot help obſerving, that one may extract a good yellow Colour, for illuminating of prints, from the freſh Roots of Ginger, if one can get nothing elſe; I ſpeak this, becauſe ſometimes one wants a good Yellow, and any one may find this any where, if Gamboge can't be had; and it makes a fine Green, with the tranſparent Verdegreaſe I ſhall hereafter mention. *N. B.* This laſt Hint I took from Mr. *Boyle*'s Papers.

It is again to be remark'd, that the *Engliſh* and *Dutch* Yellow Pinks are made with *French* Berries ground to a fine Powder and boiled.

CHAP. VIII.

Of Orange Colour.

THE Orange-colour, which is uſeful to waſh fine Prints with, conſiſts in laying on a Teint of Gamboge, and over that, ſome of the Minium or Red-lead,

* By *bel'd* is meant the boiling of pure Gold in Liquors, which will take away the Yellow of it, and bring it to be of a reddiſh or higher Colour.

ſuch as I ſhall deſcribe, to be waſh'd, and render'd fine and fit for Uſe; for, as it is bought at the ſhops, it is not by any means fine enough to paint with, and eſpecially will change or turn black after a few Weeks, if it be not refin'd; but if it be well prepared, will be very laſting and beautiful: But we muſt take this by the Way, that in the refining of it, two Ounces will not produce above 40 Grains of good Colour, to ſtand the Teſt of the Painters. I ſhall preſently deſcribe the Method of Preparing it: This Colour may be mix'd with Gamboge, upon a white *Dutch* Tile to render it of the Teint we deſire, either ſoft or ſtronger; or one may glaze the Gamboge, and ſtrengthen it with Tincture of Saffron, to make it glare into a ſtrong Orange.

CHAP. IX.

Of Minium, *or the brighteſt Red-lead, and how to prepare it.*

THE Minium, or Red-lead, is as heavy and ſtrong a Colour as moſt we have, but is the moſt delightful one, when well prepared, that is, when 'tis well waſh'd and clean'd of its more weighty Parts, which occaſion it to turn black. My Way of doing it, as the great Mr. *Boyle* directs, is to put 3 or 4 Ounces of it in a Quart of Rain-water; then ſtir it, and pour off the Water immediately, and let it ſettle to the bottom of every Cup or Glaſs you pour it in; then pour off that Water, and in a Day's time you will have the Colour dry, and as fine as you can wiſh; put then a little piece of Gum Arabick to each Glaſs or Cup, and as much Water as will moiſten each of them; Uſe any of theſe afterwards with the Gum-water, as ſhall be hereafter directed; but if the Gum, you ſhould happen to put in at firſt, may be ſtrong enough to glaze it, then uſe only common Water; in a Word, as your Colour is leſs gumm'd or overgumm'd, uſe leſs or more Gum water; for of itſelf 'tis a dead Colour. When

When you uſe this Colour, touch it gently on the Yellow we have mentioned into the light Side, and if it wants a Shade, there may be a little Vermillion Put upon it; but Vermillion is too heavy to paint with, when we illuminate Prints, becauſe it hides the Shades of the Engraver; however, ſometimes they had better be hidden than preſerved: For my part, I generally ſhade this Red lead or Minium with Carmine, which gives it a fine Effect, and renders it equal to the brighteſt red Flower I ever ſaw, leaving ſtill the Lights uncoloured, only daſhing a little way into the Lights with the Minium.

Vermilion I muſt adviſe to be left out of the Queſtion, unleſs it is well waſh'd, as I have directed the Minium to be, and then chiefly for dry painting; One may think then, that after I have adviſed the Vermilion to be abandoned, it ſhould be quite left out of my Table of Colours; but I ſpeak at that Time to ſuch Perſons as can uſe it moderately, and with Judgment; for all heavy Colours will drown the Shades or Strokes of the Engraver.

When the Carmine has ſhaded the Minium, or Red-lead, it may be ſhaded again with Lake in the ſtrongeſt Part, to bring it to a deeper Red.

It may be a Wonder to ſome, that when I ſpeak of Orange.colours, I ſhould mention ſome of theſe deep Sorts, tending to Purples; but I mention them as Shades, and without which the Orange or Red could not appear with any Brightneſs.

CHAP. X.

Of Reds.

SECT. I. *Of* Scarlet.

WHEN we have paſſed the Orange, we next come to the Scarlet, which may be repreſented on a Plane with Minium, a little mix'd with Vermillion; but

but if you have Occaſion to paint a Flower of a Scarlet-colour on a Print, let your Lights, as well as Shades, be covered thin with Minium, and the ſhaded Parts glazed with Carmine, which will produce an admirable Scarlet, ſuch as we ſee in the Flower of the Scarlet Martagon.

SECT. II. *Of* Crimſon.

FROM the Scarlet we next come to Crimſon, which is repreſented with Carmine; but I muſt inform the Perſon who is to uſe it, that there are ſeveral ſorts of it, ſome darker, and ſome much coarſer than others, and therefore it ſhould never be bought by Candle-light, unleſs of ſuch as one can well truſt; for between the very beſt and the worſt Sort, there is about ten Shillings difference in an Ounce, or indeed all the Money an Ounce will coſt, for the bad will ſpoil all our Work.

SECT. III. *Of* Lake.

AFTER this Crimſon, comes next the Lake, which ſhades and heightens the Carmine; but it is to be obſerv'd, that in the laying of Carmine upon a Print, let your lights be touched only with a very thin Teint of it, hardly to be diſcerned; then juſt on that part of the Light which enters upon the ſhade lay it on ſtrong, and cover the ſhade with it; and after that, on the ſtronger part of the ſhade lay ſome Lake.

SECT. IV. *Of tranſparent* Crimſon.

BUT we may make a liquid Colour, not much inferior to Carmine itſelf, with the Raſpings of Brazil-wood, ſold at the Dry-ſalters and particularly at the great Colour-ſhop at *Holborn bridge*; which I mention, becauſe I have been ſome time without knowing where to find it, for few Colour-ſhops know what it is; and Lovers of Painting in this Way, are now and then impatient to have ſuch Things, and unacquainted where to find them out.

To make this tranſparent Colour, we may take an Ounce of the Raſpings of Brafil-wood, and boil it in twelve Ounces of pale ſtale Beer, and a little Allum, 'till the Colour of the Liquor is as ſtrong as you pleaſe; which you may diſcover, by dipping into it a ſlip of white Paper, and when the Colour is as you would have it, and 'tis cold, paſs it through a Linnen-cloth, and put the clear Liquor into a Bottle for Uſe. This is one of the Receipts I had from a Manuſcript of the great Mr. *Boyle*.

And if we have a mind to bring this Colour to a Body, take Ox blood, and dry it, till we can reduce it to Powder, which, being mix'd with it, will give us a Colour, which *I think will be little leſs* in Value than a middling ſort of Carmine: And, as a Gentleman of Learning and good Underſtanding in theſe Matters informs me, the Blood of an Ox or Cow ſo dry'd, will make a good Body for any Colour.

SECT. V. Crimſon *from Mr.* Boyle.

TAKE the Fruit of the Berry bearing Spinach, which is known to every Gardener about *London*, preſs them, and you will have a beautiful red colour'd Juice from them; boil this, and put about a fourth part of Alum to it when you pour it into the Veſſel where 'tis to cool, and then it makes as fine a Colour as any others that are noted, and it is of little Expence, for it will grow any where; and in one Bunch of the Fruit there are Seeds enough to ſow two or three Rods of Ground.

The red Beet-root, back'd with a little ſtrong Vinegar, produces an elegant red Colour, equal to a Tincture of Carmine, then pour it on Alum, and when 'tis cool 'tis fit for Uſe, where Carmine ſhould be uſed in waſhing of Prints: For it is a fine tranſparent red.

SECT. VI. *Of* Indian-Red.

NEXT to theſe Colours, Indian-Red, though it is a Colour of a Body, is helpful for a back Ground, for Flowers at a Diſtance, being uſed thereby with Gum-water.

water. But I ſhall have Occaſion to give an Example of it by and by.

I have lately ſeen an Earth brought from the *Iſle of Wight*, of a much finer Colour than the Indian-red; which I and ſome others, have try'd, and find to mix extreamly well with Gum-water; tho' as it is of a viſcous Nature, it requires leſs Gum than moſt other Colours: And as it is naturally fit for Uſe without Grinding, and is viſcous, ſo it will aſſuredly mix as well with Oyl as with Water. This was diſcovered by *Edward Liſle*, Eſq; to which Gentleman we owe many more extraordinary Things of Value.

There is one thing very extraordinary in this Earth, ſimple as 'tis, that if we rub a Deal-board with it, it renders it exactly of the Colour of Mohogany-wood, and ſtains it ſo deep, and with ſo much Strength, that it is very hard to get it out without waſhing. And dry as this Earth was when I receiv'd it, I cannot get it out of ſome Papers, which by Accident were mix'd in my Pocket with it; ſo that I am perſuaded it will prove of extraordinary Uſe, when its Virtues come to be known.

SECT. VII. *Of tranſparent* Purple.

AFTER this we may make a tranſparent Purple, either more red, or nearer the blue Colour, as we ſhall ſee Occaſion, by uſing the ſame Menſtruum as was preſcribed in the former, *viz.* of pale ſtale Beer one Pint, in which boil one Pint of raſped Braſil-wood, and half an Ounce of Log-wood or Campechy- wood, till the Liquor is heighten'd to the Colour you deſire; which you muſt try, by dipping a piece of Paper into it. If you then find it too red, add a Quarter of an Ounce of Log wood to the Braſil-wood, and you will find it much nearer the Purple than the former; and ſo one may humour any Degree of Purple, as you put more or leſs Log wood to the former Compoſition, and fix the Colour with a little Alum. This will produce ſuch clear Purples, as no Mixture of ſolid Reds and Blues can produce, and the Receipt has been for a long time kept a Secret.

Madam

Madam *Mariana* of *Amſterdam*, who has been ſo famous for her Painting in Minature, and her excelent Manner of illuminating Prints, told me, that the beſt Purple I could uſe, might be compoſed between the Carmine and Indigo; which to ſtrengthen on the red Side one may add Lake between the lighter and darker Part; which I have in many Caſes found to be good, and of Significancy: And ſo Lake, when it is uſed in the ſame Way on the foregoing Purple, or the Liquid Crimſon, produces a very fine Effect. One may vary the Colour of the Purple either redder, by putting more Carmine, or bluer by uſing more Indigo, which being mixed on a white *Dutch* Tile, will ſhew itſelf.

CHAP. XI.

Of Blue.

SECT. I. *Of the* Ultramarine.

THE firſt and beſt bright blue we have, is the Ultramarine Blue, which gives a Spirit to all Paintings where Blues are uſed, but it is very dear, if we have the beſt, even worth, or at leaſt ſold at ſix Pounds an Ounce; it is made from the *Lapis Lazuli*, diveſted of its Gold, and ground and made into an impalpable Powder. This Colour however, as it is of a very high price, will make good its Value in Painting, as the leaſt Touch of it is enough to illuminate a Flower. In uſing it, leave the white or light part of the Flower uncoloured, excepting that on the Edge of the light next the ſhaded Parts, colour it with Ultramarine; and, a little into the ſhaded part of the Print, add a faint Tincture of Indigo, the Indigo covering a little the Verge on the ſhady ſide of the Ultramarine, ſo will your Flower, *&c.* if it be a bright Blue, appear extreamly beauti.ul.

N. B. This is a colour of Body, and will laſt as long as one would deſire, and even preſerve any Colour you can mix with it.

To uſe it ſingly, there is nothing more dazling; as appeared in the caſe of Colouring Iron-gates, which many Years ago was executed at the Entrance of *Devonſhire-houſe* in *Picadilly*. This Colour was laid upon the Iron-work, at the Expence of many hundred Pounds, and remain'd in great Beauty 'till they were taken down, and the Entrance of that Palace altered; which ſhews that this Colour will not change, though it ſuffers all kinds of Weather; for 'tis computed that they had been expoſed upwards of ſixty Years. But the beſt Colour of this ſort is rarely to be met with.

SECT. II. *Of the* Pruſſian Blue.

THE Pruſſian Blue is the next to the Ultramarine for Beauty, if it is uſed in Oyl; tho' I imagine it will not hold ſo well as the foregoing, conſidering it has not the Body of Ultramarine. This Colour, however, is attempted to be ground in Water; but there is ſuch an oily Quality in it, that it does not mix kindly with Water, and at the beſt will change, as it is now prepared in the common Way. It has been attempted to make a blue Ink; which indeed held the Colour for a Month or two, but then turn'd to a muddy Yellow; ſo when you put your pencil with Gum-water into a Shell of this Blue, you will find where the water ſpreads, the Blue will change yellowiſh, till the Body of the Blue is well ſtirr'd up. And when we have done our beſt with this Colour in Water, it will only ſerve to ſhade Ultramarine with; but in Oyl it ſerves very well for the preſent to fill the place of Ultramarine.

SECT. III. *Of* Blue Biſe.

THE next Colour to the foregoing for Brightneſs, is that which we call blue Biſe; which tho' it is a Colour of body, will flow pretty well in the pencil; eſpecially if it be well waſhed, as I have directed the Whites and the Minium to be done.

SECT.

SECT. IV. *Of* Sanders Blue.

AFTER this Colour the Sanders Blue is of very good Uſe, and may ſerve as a ſhade for Ultramarine, or the blue Biſe, where the ſhades are not required to be extremely deep, and is of itſelf a pleaſant Blue, to be laid between the Lights and ſhades of ſuch a Flower as is of a Mazarine Blue, as 'tis called.

SECT. V. *Of* Lacmus *or* Litmus Blue.

ANOTHER Blue, which is a beautiful Colour, and will run in a Pen as free as Ink, is made of Lacmus, or as ſome call it Litmus, which may be met with at moſt Druggiſts. This Colour however is never met with prepared for Water colours; and therefore I ſhall ſet down the following Method of preparing it according to Mrs. *Mariana*, for it affords a bright Colour, which has extraordinary Effects.

Take of Lacmus one Ounce, and boil it in about a pint of Small beer Wort, till the Colour is as ſtrong as you deſire, then pour off the Liquor into a Gallipot, and let it cool for Uſe; it will ſoon become a Jelly, and by Degrees grow hard. This Colour, however, is to be opened again, and made liquid by Water, ſo as to be uſed as Ink; and as it is rendered thinner or thicker, ſo will it be paler or darker. By what I find of this Lacmus, it is not only a beautiful but an holding Colour; for I have ſome Deſigns I coloured with it in the Year 1714, which ſtill preſerve themſelves in as much beauty as they had at firſt; and I have ſeen ſome in *Holland*, which were ſaid to be done with it forty Years before, which a Year or two ago look'd ſtill as freſh as one would deſire the firſt Day one uſed it. This Colour, however, if it be touch'd with *Aqua fortis*, immediately changes to a fine Crimſon, little inferior to Carmine, and then ſinks quite through the Paper ſo as not to be got out.

So that when we uſe this Colour as Blue, it is beſt to preſerve it from *Aqua-fortis*, or ſuch ſtrong Acids. It is a good ſhade for Ultramarine, or blue Biſe, where the ſtrongeſt ſhades ſhould not be extremely deep; and for colouring of Prints it is very good, as it is a tranſparent Colour, and goes a great Way.

SECT.

SECT. VI. *Of* Indigo.

INDIGO is the next Colour I ſhall ſpeak of, as it certainly makes the ſtrongeſt ſhade for Blues of any other, and is a ſoft and warm Colour, when it is well ground and waſh'd with Gum-water, by means of a Stone and Muller. As one happens to want the Uſe of this, put more Gum water to it, if you would have it of the lighteſt caſt, or leſs, as you would have it darker; but before you touch your Print with it, try its Strength upon a white *Dutch* Tile, for it runs warmly in the Pencil, and may chance to be too ſtrong for your Deſign; which you ſhould always think of, when a flowing Colour is to be laid over a dark ſhade of a Print; which ſhade will much aggravate its Blackneſs, and even make it appear quite Black.

SECT. VII. *A fine* Blue *from Mr.* Boyle.

TAKE the blue Leaves of Rhue, and beat them a little in a Stone mortar with a wooden Peſtel; then put them in Water, Juice and all, for fourteen Days, or more, waſhing them every Day till they are rotten; and at laſt beat them and the Water together, till they are in a Pulp, and let them dry in the Sun. This will produce as good a Blue as Indigo, and be much ſofter; but to keep it a long while, when you beat it the laſt Time, add a little Powder of Gum-Arabick: You may put more or leſs of the Gum, as you deſign to make it more free or tenacious in the Working. 'Tis a fine Blue for ſhading, and has a good Body, and runs warm in the Pencil.

SECT. VIII. *Of Mr.* Boyle's *tranſparent* Blue, *equal to Ultramarine.*

IN the next Place, I have a Colour to deſcribe, which I took from the great Mr. *Boyl*'s Manuſcripts given me by my Lord *Carleton*, and proves a beautiful Blue; and what I admire it for the more is, becauſe the chief of the Ingredients it is compoſed of, may be eaſily had during four of the Summer Months, that is, the Cyanus or blue Cornbottle-flower, which abounds in almoſt eve-

ry

ry Corn-field ; Children may gather it, without hurting any thing, about the Skirts or verges of the Corn-fields This Flower has two Blues in it, one of a pale Colour in the larger outward Leaves, and the other a deeper Blue, which lies in the middle of the Flower ; both theſe will do, if they are ſeparated from the Buttons or Caſes they grow in ; but the deep Blue, of the Middle produces much the beſt Colour, as one may try, by rubbing it while it is freſh, ſo hard upon a piece of good writting Paper, as to preſs out the Juice, and it will yield an excellent Colour, which will not fade as the Experience of two or three Years has ſhewed me. This part of the Flower is therefore the principal, and what is to be depended upon ; therefore the ſame Day that People gather the Flowers,or the next at the lateſt, employ ſome Children to pick that part clean from the reſt ; and when you have a good Quantity, preſs what Juice you can from it ; and by adding to that a little Allum, you will have a laſting tranſparent Blue, of as bright a ſtaining colour as you would deſire ; and in my Opinion, it is not inferior in Beauty to Ultramarine : But for the other parts of the Flower, which are paler, I muſt obſerve, that when I had a Buſhel of them gathered, and had not an Opportunity of preſſing them immediately, they changed white ; ſo that I cannot commend them, leſt the Alum ſhould not fix them ; but as for the middle of the flower, it is certainly as good a Blue as can be deſired, and is durable.

If any one ſhould object, that 'twill be troubleſome to make it ; let him conſider only what pains there is in gathering and curing of Saffron which ſometimes is ſold at thirty Shillings the Pound, and ſeldom brings three Pounds *per* Pound : But a Blue, if it comes up to the Colour of Ultramarine, is worth four or five Pounds *per* Ounce, eſpecially when it ſtains ſo well as this does ; therefore I ſhould think it worth while, when any one has made this Experiment, as I have done, to have a piece of Ground on purpoſe for this Uſe, where no other Thing but this Corn-bottle, or Cyanus ſhould be ſown : And as this Flower is plentiful enough in the Fields between *Twittenham* and *Tedington*, in *Middleſex*, ſo there may

may be Seed enough gathered of it, in a Quarter of an Hour, to ſow an hundred acres. There is likewiſe abundance of it in the large Corn fields in *Cambridgeſhire*. But how valuable are many Things that we daily trample under Foot; if we knew their Virtues, we ſhould uſe them, provided we could bring them to a proper Market. But let that be as it will; gather the Flowers about the beginning of *June* or in *July*, or *Auguſt*, and ſome you may find in *May*; theſe are for your immediate Work to make the Colour of, and muſt be diſpatched as Saffron is done, or it will loſe its Perfections. And as I happen to mention Saffron, which I very well know the Management of, by drying it on Kilns, I do not ſee why theſe Chives of Flowers may not be cured in the ſame Manner; they would certainly produce a much greater body of Colour, and a Tincture might be drawn from them with more eaſe, than if we were to preſs them raw or freſh from the Field.

The Way then that I would have them dry'd like Saffron, is, to provide in the firſt place ſuch a Kiln as is uſed for curing Saffron; within which, make a ſmall Charcoal-fire, which communicates an Heat to the top of the Kiln, which is covered with an Hair Cloth; and upon that, lay on four or five Sheets of white Paper, I mean ſuch as we uſe for curing of Saffron; then lay on the Paper a parcel of the picked Flowers, till you have the thickneſs of two or three Inches, laying cloſe and flat with a Knife, and ſprinkle it with ſome thin Gum-water: then cover the Cake of Flowers with two or three more Sheets of Paper, and lay upon them a Board with a little Weight upon it for a few Minutes; then take off the Board, and, taking hold of all the Papers with both Hands, turn your Cake of Flowers upon the Kiln, and when 'tis rightly placed, take off the upper Papers, and ſprinkle the Cake again with ſome thin Gum water, and with a Knife ſettle your Cake of Flowers, and lay on again your Papers and Board, with a Weight upon it for a Minute or two, and then turn your Papers again and again, till the Flower-cake becomes united, and of the thickneſs of a Cake of Saffron; in this Work you will find the Flowers grow darker every time they are turned,

turned, till at length the Cake will look of a deep Blue tending to Black. From whence we eaſily draw ſuch a Tincture as I ſpeak off.

During this Operation, great care muſt be taken of the Fire, that it does not ſcorch the Flowers; let it be gentle and as conſtant as may be, which will be a ſure Way to bring your Flower-cake to a good Colour.

I would adviſe in this Caſe, that whoever attempts this they ſhould ſee the Management of Saffron, or read Accounts that are publiſhed of the curing it.

If any one is deſirous of ſeeing the curing of Saffron, with the Manner of the Kilns; the beſt Artiſts that way, are about *Cheſterford* and *Little-burry* in *Eſſex*; though I think it can be of no great Moment, ſince there is publiſhed a large Account of its Preparation, in Mr. *Bradley*'s *Monthly Treatiſe of Huſbandry and Gardening*; and in the preſent Caſe of the Blue, I have made the neceſſary Alterations, and I think given what is ſufficient for ſuch as are acquainted already with the curing of Flowers by Kiln-drying.

But I come now to ſpeak of the Culture of this valuable Flower; for I muſt now ſo call it, ſince I am well aſſured of its perfections.

Every Knob or Head of Seed muſt be open'd before we ſow it, for each Head contains a great number of Seeds; the preparation of the Ground for the Recption of this Seed, need not be more troubleſome or expenſive than common Ploughing requires; which being done, ſow the Seed either at the End of *Auguſt*, which will come up ſoon enough to ſtand the Winter, and bloſſom early the *May* following; or elſe ſow it at the End of *March*, and it will begin flowering the following *June*. When the Ground is freſh plow'd at either of theſe Seaſons, ſow the Seed, and harrow it in with Buſhes, and it will preſently come up.

In the Choice of the Seed I ſhould obſerve, that it be gathered only in ſuch Fields where we are ſure there grow no Corn-bottles of any other Colour but Blue, and then one may expect all the plants which riſe from ſuch Seed to produce blue flowers; but if they ſhould be gathered in ſuch places, where there are Varieties of them, we muſt

expect

expect various Sorts, as White, Red, or Purple, although we are ſure we gather the Seed from ſuch as were truly of the blue Sort; for according to the Doctrine of the Generation of Plants, which has been explained to the World in a great many Inſtances, if there is a red Flower of the ſame Tribe with this growing near it, the difference of Colour will be ſo intermix'd between both, that the Seed of both will bring a variety from the principal, depending of the Colours of both. And thus I conclude what I have to ſay of Blues; as for the Smalt, 'tis much too heavy a Colour to be uſed for illuminating of Prints.

CHAP. XII.

Of Black.

THE proper Black for Water-colours, is what they call Ivory black, which if it be pure and well ground, is of uſe in miniature Painting; but very ſeldom; and indeed ought not to be uſed in colouring of Prints, if they are good, for 'tis too heavy a Colour, and hides the beautiful Strokes of the Engraver, unleſs done with very great care: If it is neceſſary however to uſe Black by way of darkening a Print, rather chuſe a ſtrong Tincture of good *Indian* Ink, than the Ivory-black; but to colour pieces in Miniature, uſe the Ivory-black prepared as follows.

Let your burnt Ivory be wellground in Gum-water, and then beat the White of an Egg very well till you find a kind of oily Liquor ſettles to the bottom; this Liquor mix with as much of the Ivory-black as you think neceſſary to make it run freely in the Pencil, and it will afford an extraordinary Gloſs; and if the Object is ſhining, ſuch as the Wings of ſome Beetles, mix with ſome of it a little White upon a *Dutch* glazed Tile, til you find it light enough to relieve the Sade; and then make another lighter Mixture of the ſame, which being uſed on the brighter part of the Subject, will produce the Effect you deſire.

CHAP.

CHAP. XIII.

Of Greens.

The Progreſs of Greens from Yellow to Blue.

I HAVE already given an Account of the progreſs of Colour from White, through the Yellows to the Orange, the Reds, Purples and Blues, to the Blacks: and ſhall now treat of the Greens in their ſeveral Orders, from the Yellows to the Blues.

Greens are allowed by all to depend upon the Yellow and the Blue, and by the help of one and the other Colour, may be framed any green Colour we pleaſe.

The Gamboge is one of our firſt Yellows, which, with the preparation of Verdigreaſe, I ſhall inſert, may be made to produce five or ſix Sorts of Green, according as the Gamboge abounds, or is in leſs Quantity; if it abounds, one may make a tolerable Oak-green with it, and being ſtill more mix'd with the Verdigreaſe green, it will be a Graſs green.

But the Yellow that I prefer before all others, is that which is made of *French* Berries deſcribed above, which I have obſerved is of different Capacities, as the Liquor it is boyled in is more or leſs ſtained with it; when it is very thin, it makes a good Glaze all over the Verdigreaſe, and, as it comes nearer to *Dutch* Pink or Gall-ſtone, commands almoſt any Colour we want, being agreeably mix'd with the tranſparent Verdigreaſe, and ſtill is tranſparent.

So the Yellow drawn from the Roots of Barberries, and thoſe drawn from the Roots of the Mulberry-tree, will produce in great meaſure the like Effect, being mix'd with the tranſparent Verdigreaſe.

As for the Verdigreaſe itſelf, it produces a fine blueiſh Green, flows eaſy in the Pencil, and may even ſerve as an *Ink* to write with.

The preparing of this Colour is yet very little known and I ſhall therefore inform my Reader how to do it.

Take of common Verdigreaſe three Ounees, break it a little, and boil it gently in a Pint of White-wine Vinegar, ſtirring it continually; when you perceive it to boil, add a little Tartar broken, and keep your Mixture ſtirring till you find the clear Liquor of ſuch a Colour as you would wiſh; that is, of a fine tranſparent Green, with a blue Caſt, which you may do by dipping in a Stick, and touching a piece of Paper with it.

When you have a Colour to your Mind, pour it through a Linnen-cloth into an open Veſſel, and ſet it to cool; when it is quite cold, keep it in a cloſe Veſſel for Uſe, puring out a little at a time as you want it; for when it is expoſed to the Air, it will ſoon dry, but is reducible again by common Water.

When we prepare this liquid Colour, do not uſe the diſtilled Verdigreaſe, for it will not anſwer the end we propoſe.

This Liquid ſhould be touched upon part of the Lights and Shades of a Print, and the Shades afterwards coloured with Sap-green.

N. B. In the making this Green, take care you make it ſtrong enough, for it is not to be ſtrengthned afterwards, without the trouble of boiling afreſh, but may at any time be rendered as faint as we pleaſe, by mixing common Water with it.

Sap green is a colour like that of an Oak leaf, if it is uſed thin with common Water; for this as well as the former wants no Gum, but it will, if we uſe it ſtrong, produce as dark a Green as any we can imagine: We may try our Colour firſt on a white *Dutch* Tile, and by thinning it with Water, render it of what Strength we pleaſe, and brighten it very much, with adding to it a little of the Liquid Verdigreaſe.

Sap

Sap-Green is made two Ways, viz.

Firſt, Take the Flowers of the blue *Flag Iris*, or *Flower-de-Luce*, and preſs them while there is any Juice to be got from them; boil this gently in a glazed Pipkin, till it grows thick, adding a little Alum to it, and it will make a very uſeful and laſting Green.

N. B. In the boyling of any Juice, *&c.* of the Colours heretofore mentioned, uſe an earthen glazed Pipkin; for if you boil them in Veſſels of Metal, they will ſometimes change from the Deſign we intend.

Secondly, Another Way there is of producing a Sap-green, for waſhing or illuminating of Prints, which is to take the Juice of Buckthorn-berries; and tho' that Juice ſimply will yield only a dark Purple, of a very baſe Hue, yet, by adding Tartar to it, it will turn to a good Sap green, and may be brought to a good Conſiſtence by boiling.

Either of theſe Colours, will mix with the liquid Verdigreaſe above mentioned, as well as make a delicate Shade for it.

There is yet one Green more, which is admired by ſome, and carries a good Body with it, with a Degree of Tranſparency, as I make it; tho' as it is commonly uſed, it is a full-bodied Colour, fit only for Miniature painting: For this End they mix *Dutch* Pink with Indigo, to what Degree of Colour they pleaſe; but in the Place of *Dutch* Pink, my high Preparation of *French* Berries with Indigo, I think much to be preferred, as this anſwers all the Intent of *Dutch* Pink, and carries a Tranſparency with it, which the *Dutch* Pink has not. And thus have I given ſuch an Account of the Paſſage of Greens from the Yellow to the darkeſt Blue, as I think neceſſary, for the Inſtruction of thoſe who delight in illuminating of Prints and Painting in Water-colours.

CHAP. XIV.

The Uſe and Nature of Dry Colours.

1. BLUE Biſe is the moſt excellent Blue next to Ultramarine, which is too good to waſh withal, and

and therefore I leave it out here, and put in blue Biſe, which will very well ſerve inſtead of it; and indeed you may leave out both, and uſe Smalt inſtead of them, but that it will not work ſo well as Biſe; no Biſe is too good to uſe upon all Occaſions, but only when you intend to beſtow ſome Coſt and Pains upon a Piece, otherwiſe you may uſe no other Blue in your Work than blue Verditer, with which you may make a pretty good Shift, without any other Blue, I mean in any ordinary Work.

2. Indigo is a dark blue, and is uſed principally to ſhadow with upon your other blue: Indigo and yellow Berries mixed together make a dark Green to ſhadow other Greens with in the darkeſt Places.

3. Blue Verditer is a very bright pleaſant Blue, and the eaſieſt to work with in Water: It is ſomewhat inclining to a Green, and being mixed with yellow Berries it makes a good Green: This Blue is moſt uſed.

4. Verdigreaſe is a good Green, but ſubject to decay; when it is dry upon the Paper it will be of a lighter colour than it is when you lay it firſt on, therefore, to preſerve it from that Fault, put ſome Sap-green amongſt it to diſſolve it in, and it will make it keep its colour: This colour is of a poiſonous Nature, and therefore you muſt be careful how you uſe it, that it come not near the Mouth. There is diſtilled Verdigreaſe to be bought at the Colour-ſhops, that is a far better Green than the other, but it is ſomewhat dear, and the other will ſerve inſtead of it.

5. Verditer-green is a light Green, ſeldom uſed in any Thing but in colouring Landſcapes, thoſe Places that ſhould ſhew a far off, and it is good for ſuch a Purpoſe, becauſe it is ſomewhat inclining to a blue, but you may make a ſhift to do any thing well enough without it; for a little blue Verditer mixed with Copper green and a little White, will make juſt ſuch another Colour.

6. Sap green is a dark dirty Green, and never uſed but to ſhadow other Greens in the darkeſt Places, or elſe to lay upon ſome dark Ground behind a Picture, which requires to be coloured with a dark Green; but you may make a ſhift well enough without this Green, for Indigo and yellow Berries make juſt ſuch another Colour.

7. Copper-

7. Copper-Green, is an excellent tranſparent Green, of a ſhining Nature if it be thickened in the Sun, or upon a ſoft Fire, and it is moſt uſed of any Green in waſhing of Prints, eſpecially in colouring of the Graſs-ground, or Trees, for it is a moſt perfect Graſs-green.

8. Vermilion is the perfecteſt Scarlet colour; you need not grind it, nor waſh it, it is fine enough of itſelf, only temper it with your Finger in a Gallipot, or Oyſter-ſhell, with Gum-water, and it will be ready for Uſe; if you put a little yellow Berries amongſt it, it will make it the brighter Colour; this is principally uſed for Garments.

9. Lake is an excellent Crimſon-colour; with it you may ſhadow Vermilion, or your yellow Garments in the darkeſt Places; with it you may make a Sky colour, being mixed only with white; with it you make Fleſh-colour, ſometimes mix'd together with white and a little Red lead; it is of an excellent Colour itſelf to colour Garments, or the like. *Indian* Lake is the beſt Lake, but too good to be uſed to waſh Prints with, unleſs you intend to beſtow great Curioſity upon your Work; but the beſt ſort of ordinary Lake will ſerve well enough for ordinary Uſes, but that alſo will be ſomewhat coſtly.

Therefore inſtead thereof you may uſe red Ink thickened upon the Fire, and it will ſerve very well for your Purpoſe, and better than Lake, unleſs it be very good.

Note, if you would make a light Sky colour of your red Ink, or if you would mix it among your Fleſh-colour, you muſt not thicken it; you ſhould rather chuſe to ſhadow your Vermillion with Spaniſh Brown, than thick red Ink, which will ſerve well for that Purpoſe, and is much cheaper, but it is not altogether ſo bright a colour and clear.

10. Red Lead is the neareſt to an Orange Colour, and putting a little yellow Berries into ſome of it, will make a perfect Orange Colour; but if you mean to make Fleſh Colour of it, you muſt put no yellow, but only when you would make an Orange Colour. This

Colour

Colour is uſed for the colouring of Buildings, or High-ways in Landſcape, being mix'd with a little white. Alſo, it is the only bright Colour to ſhadow yellow Garments with, to make them ſhew like changeable Taffety; it is good alſo to colour any light Ground in a Picture, taking only the thin Water of it, and ſo for ſeveral other Uſes as you ſhall ſee occaſion for it.

11. Yellow Berries are moſt uſed in waſhing of all other Colours; their Colour is bright and tranſparent, fit for all Uſes, and is ſufficient without the Uſe of any other Yellow.

12. Saffron is a deep Yellow, if you let it ſtand a pretty while; it is good principally to ſhadow yellow Berries with, inſtead of Red lead; and it is ſomewhat a brighter Shadow; but you may make ſhift well enough without this Colour, for Red lead and yellow Berries make juſt ſuch another Colour.

13. Light Maſticoat is a light Yellow, juſt like yellow Berries and white, and therefore you may make ſhift well enough without it, only for ſaving you a Labour to mix your yellow Berries with white, when you have Occaſion for a light Yellow, which you may ſometimes make uſe of to colour a light Ground in a Picture, and then ſhadow it with the Water of burnt Umber or Read-lead, that is, the thinneſt Part of the Colour.

14, 15. Ceruſe is the beſt White, if it be good and finely ground ready to you Hand, as you may have it at ſome Colour ſhops, or for want of it buy White-lead pick'd to your Hand; either of theſe will ſerve well enough, for either of them, being mingled with another Colour, make it lighter, and the more you put, the lighter they will be, as you ſhall find in the uſing of them.

16. Spaniſh Brown is a dirty brown Colour, yet of great Uſe, not to colour any Garment with, unleſs it be an old Man's Gown, but to ſhadow Vermillion, or to lay upon any dark Ground behind a Picture, or to ſhadow yellow Berries in the darkeſt Places, when you want Lake, or thick red Ink.

17. It

17. It is the beſt and brighteſt Colour when it is burnt in the Fire till it be red hot; tho', if you would colour any Hare, Horſe, Dog, or the like, you muſt not burn it; but for other Uſes it is beſt when it is burnt, for inſtance, to colour any wooden Poſt, Bodies of Trees, or any Thing elſe of Wood, or any dark Ground in a Picture: It is not to be uſed about any Garments, unleſs you would colour many old Men's Gowns, or Caps, ſtanding together, becauſe they muſt not be all of one Colour of Black, therefore for Diſtinction and Varieties ſake, you may uſe Umber unburnt for ſome of them.

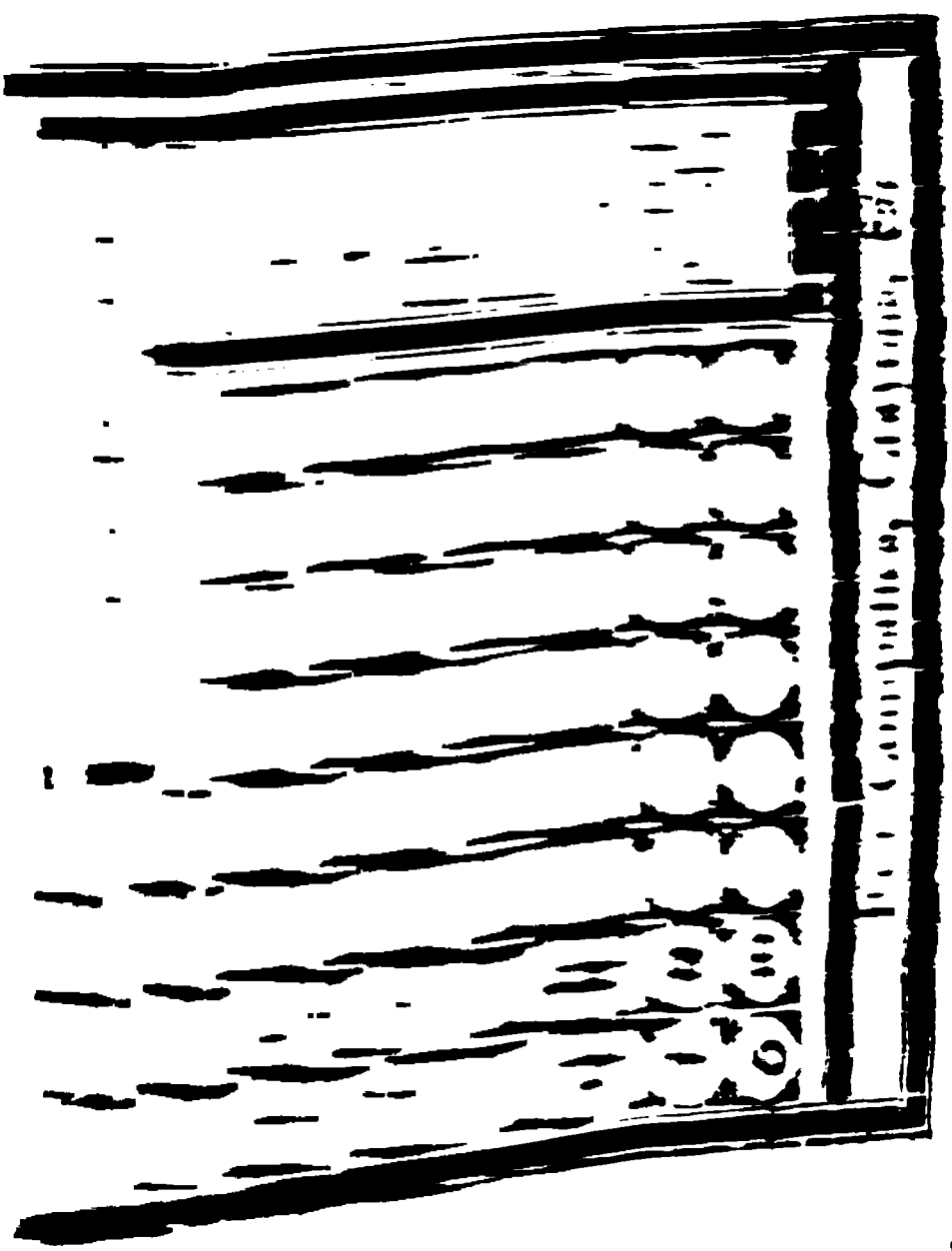
18. Printers Black is moſt uſed, becauſe it is eaſieſt to be had, and ſerves very well in waſhing. *Note*, you muſt never put any black amongſt your Colours to make them dark, for it will make them dirty, neither ſhould you ſhadow any colour with black, unleſs it be Spaniſh Brown, when you would colour an old Man's Gown, that requires to be done of a ſad Colour; for whatſoever is ſhadowed with black will look dirty, and not bright, fair and beautiful.

19. Ivory burnt, or for want of that, Bone burnt, is the blackeſt Black, and it is thus made; take Ivory, or for want of it, ſome white Bone, and put it into the Fire till it be thoroughly burned, then take it out and let it cool, and ſo ſlit it in the middle, and take out the blackeſt of it in the middle and grind it for Uſe.

CHAP. XV.

Of a portable Caſe *for Colours; with Directions for making Gum, Alum, and other Waters.*

BEFORE, however, I conclude this Treatiſe of Colours, let me adviſe ſuch Perſons, who are curious in making Obſervations of the Colours of Flowers,



In

In the foregoing Figure one may obſerve the Diſpoſition of the ſeveral Cavities for the Colours in the Numbers 1, 2, 3, 4, 5, *&c.*, and on one ſide a little Caſe for Pencils, and another for *Indian Ink*, Gum-Arabick powdered with white Sugarcandy, or for any thing elſe an Artiſt may have Occaſion for in the painting Way.

In ſuch a Caſe you may have thirty two ſorts of Colour under very eaſy Command, beſides other Neceſſaries: Then as a Cover to this, let there be a Piece of plain Ivory to open with an Hinge, that may ſerve as a Pallet, and all this will lie in a very narrow Compaſs; nay, even though one was to add another piece of Ivory of half an Inch thick, to open below that of the Colours, to include a ſmall pair of Compaſſes, a Port crayon, and ſome other ſuch uſeful Materials for Drawing.

How to make Gum-water.

There remains now, only to mention the Way how to prepare Gum, Allum, and other Waters in the beſt Manner. To make Gum-water, take of the whiteſt Gum-Arabick one Ounce, of clear white Sugar candied, half an Ounce; diſſolve theſe in a Quart of clear Water, and add to it, if you will, a little Coloquintida. When your Gum-water is thus prepared, paſs it eaſily through a fine Sieve, or a piece of Muſlin, and keep it in a Bottle ſo ſtopped, that no Dirt may get in; and as you want to uſe it, pour out a little at a Time; for if this proves dirty or foul, it will ſpoil the Brightneſs of your Colours. The uſe of the Coloquintida is only to keep the Flies from ſpoiling your Work, if it ſhould be expoſed.

To make Allum-water.

Boil four Ounces of Allum in a Quart of Rain or River-water till the Allum is diſſolved, and let it ſtand twenty four Hours.

Uſe of Allum-water.

With this water waſh the Prints you deſign to colour, which will fix the Paper ſo, that the Colours will not ſink or run in it when you lay them on, and will help likewiſe to brighten your Colours.

ers, to have always in their Pocket a ſmall Caſe with Colours in it, about the bigneſs of a Snuff box, made of Ivory, about half an Inch thick, in which ſhould be ſcooped ſeveral Concaves about half an Inch Diameter each, and as deep as the Ivory would bear, without going through: Theſe Cavities may be placed as near one another as poſſible, and filled with Colours of ſeveral Sorts; and as for the Liquid-colours, they will dry by being expoſed to the Air, ſo that one may have them altogether in a few Days dry enough to be carried in the Pocket; I ſhall ſuppoſe the Piece of Ivory diſpoſed in the following Manner, *viz.*

In the foregoing Figure one may obſerve the Diſpoſition of the ſeveral Cavities for the Colours in the Numbers 1, 2, 3, 4, 5, &c., and on one ſide a little Caſe for Pencils, and another for *Indian Ink*, Gum-Arabick powdered with white Sugarcandy, or for any thing elſe an Artiſt may have Occaſion for in the painting Way.

In ſuch a Caſe you may have thirty two ſorts of Colour under very eaſy Command, beſides other Neceſſaries: Then as a Cover to this, let there be a Piece of plain Ivory to open with an Hinge, that may ſerve as a Pallet, and all this will lie in a very narrow Compaſs; nay, even though one was to add another piece of Ivory of half an Inch thick, to open below that of the Colours, to include a ſmall pair of Compaſſes, a Port crayon, and ſome other ſuch uſeful Materials for Drawing.

How to make Gum-water.

There remains now, only to mention the Way how to prepare Gum, Allum, and other Waters in the beſt Manner. To make Gum-water, take of the whiteſt Gum-Arabick one Ounce, of clear white Sugar candied, half an Ounce; diſſolve theſe in a Quart of clear Water, and add to it, if you will, a little Coloquintida. When your Gum-water is thus prepared, paſs it eaſily through a fine Sieve, or a piece of Muſlin, and keep it in a Bottle ſo ſtopped, that no Dirt may get in; and as you want to uſe it, pour out a little at a Time; for if this proves dirty or foul, it will ſpoil the Brightneſs of your Colours. The uſe of the Coloquintida is only to keep the Flies from ſpoiling your Work, if it ſhould be expoſed.

To make Allum-water.

Boil four Ounces of Allum in a Quart of Rain or River-water till the Allum is diſſolved, and let it ſtand twenty four Hours.

Uſe of Allum-water.

With this water waſh the Prints you deſign to colour, which will fix the Paper ſo, that the Colours will not ſink or run in it when you lay them on, and will help likewiſe to brighten your Colours.

If your Paper is very thin and looſe, then let your Paper be waſhed with the above Water four or five Times, letting it dry between every Time, and your Paper muſt always dry before you lay any of your Colours upon it

But you muſt obſerve, that if you deſign to varniſh your Prints after they are colour'd, then waſh the Prints all over equally with white Starch before you colour them, and when that is dry, lay on your Colours.

To make Lime-water.

Lime-water is made by taking ſome unſlackt Lime, and covering it an Inch with Water, and ſo letting it remain for twelve Hours, pour off the clear, and keep it for Uſe.

N. B. With this Water you may change your Sap-green into Blue.

Water made with Pearl-aſhes.

Take about half an Ounce Pearl-aſhes, and ſteep them twelve Hours in Rain or River-water, then pour off the clear, and that Water is excellent to uſe with Braſil-wood, in order to enliven its red Colour.

Size for for Water-colours.

Take the Cuttings of white Glover's Leather, boil them in common Water till the Liquor will jelly; you may prepare any Colour with this Size when it is warm, and it ſhould always be uſed warm.

The Uſe of it is, that none of your Colours ſhould ſhine by Candle light, as they would do if they were to be mixt with Gum water; therefore the Scenes of Play-houſes are painted in Size.

THE

SCHOOL

OF

MINIATURE,

PART III.

Erected for the Inſtruction of the Ignorant, the Improvement of Proficients and the general Information of ſuch as are pleaſed with Pictures in ſmall.

Herein are contained the moſt expeditious and infallible Ways of Drawing without being taught; and all the Methods of Colouring, Stippling, *&c.* Illuſtrated by Numbers of Practical Proceſſes upon each Head or Article; particularly uſeful to thoſe who would Copy in Colours from a Print.

To the Whole are annexed many valuable Receipts for preparing the Colours, which are peculiar to this Kind of Painting; communicated by the beſt *Italian* and other *Maſters*. As alſo, the Preparation of an excellent *Poliſhed Gold* and *Shell Gold*.

Publiſhed from an Old MSS.

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TO

ALL *Connoiſſeurs and Artiſts in* Painting; *and particularly to the Fair Ladies who Underſtand and Practice in* Miniature;

This moſt Valuable Piece is offered as a Preſent every Way worthy of their Acceptance and Attention,

By

Their moſt obedient Servant,

The Editor,

London, 1739.

A TREATISE ON MINIATURE.

CHAP. I.

Of the Methods of Drawing, Colours, Grounds, &c.

IT is not my deſign to make any Encomium on Painting. Many ingenious Men have done that Work to my Hands; but tho' Miniature has been included in what they have ſaid, I ſhall nevertheleſs ſpecify the Characteriſticks of this kind of Painting in particular.

1. It is in its Nature more delicate than any of the other ſorts.
2. It requires to be beheld near at hand.
3. It cannot well be executed but in ſmall,
4. It is perform'd on Vellum or Ivory.
5. The Colours are moiſten'd with Gumwater only.

To ſucceed well in your Attempts this way, you ſhould know how to draw very well; but as moſt who concern themſelves in this Art are but ſeldom skill'd in drawing, and yet would have the Pleaſure of Painting without the Fatigue of learning to Draw, in which no Progreſs is made, to ſpeak of, but with Time and much

help of a Mathematical Inſtrument, or Compaſs, as it is ſometimes called, which is commonly compos'd of ten pieces of Wood like Rulers, about the ſixth of an Inch thick, and half an Inch broad, and for their length it may be a Foot, more or leſs, according to the Size of the Piece you would copy. But that you may not miſtake, here follows a Repreſentation of it.

The Board, A, muſt be Deal, cover'd with a Cloth of ſome ſort or other, for the more convenient faſtening of the piece you would Draw, and what you would Draw upon. Then plant the Compaſs with a large pin run thro' the Foot B, If you would Draw in ſmall, you muſt place the Original at the firſt Foot C, and the Vellum or Paper you would draw upon near to the Foot, B, removing it to a greater or leſs Diſtance according as you would have your piece greater or ſmaller.

To draw in great from ſmall you need only ſhift your Copy to the Place of your Original, putting the former at C, and the latter at B; and in each Caſe you muſt put a Crayon or Silver Pin into the Foot over your Vellum, and a Pin ſomewhat blunted, in the Foot over your Original, with which you are to follow all the Lines, while you bear, with your other Hand, gently upon the Pin or Crayon on your Vellum. If one or the other be well fitted in the Foot you need not bear thereon at all.

You may Draw alſo of equal ſize, but to do that you muſt plant your Compaſs in a different manner, it muſt be fix'd with a pin or Axis run thro' the Center D; and the

the Original and the Copy muſt be at an equal Diſtance from the Center. In a word, you may Draw ſeveral Copies at a time, and each of a different ſize, or equal to each other, juſt as you ſhall pleaſe.

SECT. VI.

Theſe are all the Helps needful to be known by thoſe who are unſkill'd in Drawing. When your piece is ſketched out upon the Vellum, you muſt with a Pencil of thin Carmine run over all the Strokes, that they may not be defac'd in working. This done, clean your Vellum with Crumb of Bread.

SECT. VII.

Your Vellum muſt be glued to a Copper Plate or to a piece of thin Board, exactly of the ſame ſize with your intended piece, to ſtretch it upon; but your Vellum muſt be a Finger's breadth larger every way than what you glue it to, for your way is to lap it round behind and there glue it, not offering to lay any Glue under your Paint, not only for fear of ſome Deformity, but alſo becauſe of the Impoſſibility of taking it off again. But firſt of all you muſt moiſten the fair ſide of your Vellum with a piece of fine wet Linnen, and put a piece of white Paper to the back ſide of it, and ſo apply it to the Plate or piece of Board, and ſtretching it thereon equally in all Directions glue it as we juſt now directed.

SECT. VIII.

The Colours uſ'd in Minature Painting are,

Carmine.
Ultramarine.
Lake of all ſorts.
Vermillion.
French Pink.
Orpiment.
Gumboge.
Naples Yellow.
Maſticoat Pale.
Maſticoat Yellow.
Indigo.
Ivory Black.
Lamp Black.
Black Lead.
Brown Red.
Gall Stone.
Brown Oaker.
Spaniſh Brown.
Umber.
Bladder Green.
Verditer.
Sea Green.
German Aſhes.
Flake White,
and
White Lead,

SECT. IX.

As all Terrene Colours and other grofs Subſtances are too coarſe for fine Works, how well ſoever they may be ground, becauſe of a kind of Sand which ſtill remains; you may ſeperate the fineſt Particles by tempering your Colour in a Cup of Water. Having ſtirred it well with your Finger, and the whole being thoroughly ſoaked, let it ſubſide for a little while, and then pour it off, by Inclination, into another Veſſel, and what you pour off will be the fineſt Particles, which you muſt afterwards ſet to dry. The Colour thus prepared muſt, when you want it, be temper'd with Gum-water, as ſhall be ſaid hereafter. This is a good Contrivance, and perfectly calculated for the Delicacy of ſmall Works.

SECT. X.

If you mix a little of the Gall of Ox, Carp, or Eel, but chiefly of this laſt, with all your Greens, Blacks, Greys, and Yellows, you will give them a Luſtre and Vivacity not natural to them. You muſt take the Gall of Eels when they are ſkin'd, and hang them by a Nail to dry, and when you want any, you muſt ſteep it in Brandy, and mingle ſome of it with the Colour already tempered. It will cauſe the Colour to take to the Vellum more ſtrongly, which it will not eaſily do when the Vellum is greaſy; again, the Gall prevents it from Peeling.

SECT. XI.

There are Colours which purify by Fire, ſuch as the Yellow Oaker, Brown Red, Ultramarine, and Umber; all others blacken thereby: But if you burn the above-nam'd Colours with a ſtrong Fire they change; for the brown Red turns Yellow, the Yellow Oaker turns Red, the Umber reddens alſo, and White Lead becomes of a Lemon Colour, and is call'd Maſticot. Obſerve, That the Yellow Oaker burnt becomes ſofter and kinder by far than before, and more ſo than the pure Brown Red: And reciprocally the Brown Red being burnt becomes more ſoft and agreeable than the pure Yellow Oaker; they are both very good. The fineſt and moſt ſincere Ultramarine burnt in a red-hot Shovel, becomes much more brilliant than before; but, refin'd after this Manner,

ner, it diminiſhes and becomes coarſer and harder to work with in Minature.

SECT. XII.

All theſe Colours are temper'd in ſmall Ivory Cups, made on purpoſe, or in Sea Shells, with Water, in which have been previouſly diſſolv'd Gum Arabic and Sugarcandy; for Example, in a good Glaſs of Water put the Quantity of your Thumb of Gum-Arabic, and half that Quantity of Sugarcandy. This laſt prevents the Colours from ſcaling when applied, which they commonly do without it, or when the Vellum is greaſy.

This Gum water you muſt keep in a neat Bottle always ſtopp'd up, and never dip a colour'd Pencil into it, but take it out with a Quill or ſome ſuch thing.

Some of this Water you muſt pour into a Shell, together with the Colour you want, and temper them with your Finger till the whole be very fine. If you find your Colour too hard, leave it to ſoften in the Shell before you temper it, then ſet it to dry, and ſo do by all, except the Iris Green and Bladder Green and Gamboge, which muſt be tempered with Water only: But Ultramarine, Lake, and *Spaniſh* Brown muſt be more gumm'd than other Colours.

If you uſe Sea Shells, you muſt firſt ſoak them for two or three Days in Water, then ſcower them well in hot Water, to clear them of a certain Salt which ſpoils the Colours if not waſh'd away.

SECT. XIII.

To know if your Colours are ſufficiently gumm'd, you need only make a Stroke with your temper'd Colours, upon your Hand, which will immediately dry: If they break and ſcale, they are too much gumm'd; and if they rub out by paſſing your Finger acroſs them, they have not enough. Again, if you lay your colours upon Vellum, and upon Trial find that the Colours come off upon your Finger like Duſt it is a Sign they are not enough gumm'd, and therefore you muſt put more Gum into the Water you uſe: Take heed, tho', that you put not in too much, for that will have a hard and dry Effect, your Colours will be glutinous and ſhining: Thus

the

the more they are gumn'd the darker they are; and if you would give a greater Body to a Colour than it naturally has, you need only Gum it well.

SECT. XIV.

You muſt have a ſmooth Ivory Pallet, of the ſize of your Hand, upon which you muſt diſtribute the Colours for your Carnations or Fleſh, after this manner: In the middle you muſt put a Quantity of White, well ſpread out, becauſe it is the Colour moſt reſorted to, and from the Left to the Right of it, along the ſide you muſt place the following Colours.

Maſticoat,
Orpiment,
Oaker,
A Green, made of Ultramarine,
French-Pink, and White, equal Parts of each.
A Blue, made of Ultramarine, Indigo, and White. It muſt be very pale.
Vermillion,
Carmine, *and*
Black.

On the other ſide of your Pallet you muſt alſo ſpread out ſome White, as before; and when you are to paint Draperies, or any thing elſe, you muſt, near it, put the Colour you intend to make them of, therewith to work as I ſhall inſtruct you hereafter.

SECT. XV.

It is of great Importance that you ſhould have good Pencils: When you chuſe them, wet them a little, and twirl them upon your Finger; if they keep their Point they are good, but if they break into many Points of different Lengths, they are good for nothing, particularly for * *Stippling*, but above all for Carnations. When they are too ſharp pointed, with only four or five Hairs ſticking out beyond the reſt, you muſt blunt them carefully with a pair Sciſſars. It will be proper to have them of two

* This is the Term in Minature for making of ſmall Points or Dots

two or three Sizes; the largeſt may ſerve for your Grounds, the middling for Drawing and Colouring, and and the leaſt for Finiſhing.

To keep your Pencil to a good Point, you muſt often put it between your Lips, and preſs it, and moiſten it with your Tongue, tho' you have juſt taken up Colour with it; for if you have taken up too much, you by this Means diminiſh it, and correct your Error. You need fear no Harm from doing of this; all the Miniature Colours (if you except Orpiment, which is a Poyſon) have nothing diſpleaſing to the Taſte, or noxious in themſelves, when prepar'd for uſe. You muſt be careful to repeat this very often when you are Stippling, or Finiſhing, particularly Carnations, that your Strokes may be neat and clear: As for Draperies and other Things, whether in the Drawing, Colouring, or Finiſhing of them, you need not be ſo nice; in this Caſe it will be enough if you make your Point upon the Edge or Rim of your Shell, or upon the Paper you reſt on when you are at work.

SECT. XVI.

To work as you ought, you muſt be in a Room that has but one Window, which you muſt place yourſelf very near to, with a Table and a Deſk almoſt as high as the Window, and ſo fix yourſelf that the Light may always ſtrike in on the Left Hand of you.

SECT. XVII.

When you would lay on a Colour equally ſtrong every where, as a Ground for Example, you muſt make your Mixtures in Shells, and take Care that you have enough for your Purpoſe; for if they fall ſhort, you will be put to it to prepare them of exactly the ſame Degrees of Light or Shade.

SECT. XVIII.

Having ſpoke of Vellum, Pencils, and Colours, let us now ſay how they are to be us'd. Firſt of all, if you would paint Fleſh or Drapery, or ought elſe, you muſt begin by ſketching or drawing with large, bold, but clear,

Strokes,

Strokes, like thoſe who paint in Oil; your Lights muſt, at firſt, be ſomewhat brighter, and your Shades not quite ſo dark as is required for Finiſhing; becauſe in ſtippling thereon you ſtrengthen the Colour, which if too dark at firſt, would, in the finiſhing, become too deep.

SECT. XIX.

There are ſeveral Ways of Stippling or Shading, as it may be alſo call'd; every Painter has his Manner; Some do it with round Points, others make them longiſh, o-thers again hatch with fine Strokes croſſing each other in all Directions, till the whole appears as if ſtippled or wrought with Points; this laſt Method is the beſt, boldeſt, and ſooneſt perfected, wherefore I adviſe all Miniature Painters to practiſe it, and to accuſtom themſelves betimes to be rich, mellow and ſoft in their Work, that is that the Points may be loſt in the Ground they are wrought upon, and appear but juſt enough to evince that the Piece is ſtippled. Hard and dry is the reverſe of this manner of working; beware thereof: It proceeds from ſtippling with a Colour too dark for the Ground, and too dry a Pencil, which gives the Work a rude Caſt or Favour.

SECT, XX.

Endeavour alſo to drown your Colours into each other that no Line of Separation may be ſeen between them, and ſoften your Strokes with the Colours on each Hand of them, ſo as to be equally blended with and confounded into each.

SECT. XXI.

When your Pieces are finiſh'd, heightening them a little has a fine Effect; that is, ſtrengthening the Lights with touches of a paler Colour than at firſt, which muſt be ſoftned away into the reſt.

SECT. XXII.

When the Colours are dry upon your Pallet, or in your Shells, temper them with pure Water, and when you perceive they have loſt their Gum, which you will know by their eaſily rubbing out, either on your Hand or Vellum, as I have ſaid before, temper them with Gum-water till they are in good Order.

SECT.

SECT. XXIII.

There are ſeveral ſorts of Grounds for Pictures and Portraits: ſome are quite brown with *Spaniſh* Brown, Umber, *&c.* with a little black and white; others are more yellow, being mixed with a good deal of Oaker; and others are upon the grey with Indigo. For this Work, make a Waſh of the Colour or Mixture you propoſe, or according to the Picture or Portrait you are about to copy, and with this thin Waſh ſoak or prime your Vellum: This done, lay it on thicker, and ſpread it out boldly, but uniformly, as faſt as you can. never touching twice upon one Place till it be dry, becauſe the ſecond touch carries off what the firſt laid on, particularly if you bear a little hard upon the Pencil.

SECT. XXIV.

There are ſtill other dark Grounds, and theſe are of a greeniſh Colour; they are moſt in Uſe, and beſt adapted for all ſorts of Figures and Portraits, becauſe they ſet off the Carnations to great Advantage. and are very eaſily laid, there being no Occaſion to ſtipple them, as muſt often be done to the others, which are ſeldom uniform at firſt, whereas theſe hardly ever miſs; You muſt prepare them with Black, *French* Pink, and White mingled together in different Proportions, according as you would have your Ground lighter or darker: Lay it on thin at firſt, then thick, as before directed. You may mix up Grounds of other Colours, but theſe are the moſt common.

SECT. XXV.

If you are about to paint a Saint upon one of theſe Grounds, and would make a ſmall Glory round the Head of your Figure, you muſt lay on your Ground very thin in that part, or even leave it naked, eſpecially juſt where the Glory ought to be brighteſt: At firſt lay on a pretty thick Mixture of White and a little Oaker, and as you move off from the Head, let your Oaker prevail more and more, and that it may die away into the Ground, hatch it boldly with a Pencil; and as you purſue

ſue the round of the Glory, take ſometimes the Colour of the Glory, and ſometimes that of the Ground, mixing ſome white or Oaker when it is rather too dark, and this continue till they are utterly confounded or ſcumbled into each other, and that no ſeparation between them be diſtinguiſhable.

SECT. XXVI.

To make a Ground all of Glory, you firſt lay on a bright Mixture of a little Oaker and White, adding more and more of the firſt as you draw more and more towards the Extremities of the intended Picture; and when the Oaker happens not to be dark enough, (for you you muſt go on darkening and darkening) add Gall ſtone, then Carmine, and at laſt *Spaniſh* Brown. This Ground you muſt lay in ſuch manner that the different Degrees of Darkneſs may, as much as poſſible, inſenſibly increaſe and ſtrengthen. Then you muſt ſtipple the Whole with the ſame Colours to blend it nicely together, which is tedious and difficult enough; particularly when there are Clouds of Glory in your Ground. You muſt ſtrengthen their Lights as you remove from the Figure, and finiſh ſtill with ſtippling, ſwelling out the ſaid Clouds, whoſe Lights and Shades muſt be imperceptibly loſt into each other.

SECT. XXVII.

For a Day-ſky you muſt mingle ſome Ultramarine with a great deal of White, and lay it on as ſmooth and uniform as poſſible, with a large Pencil and broad Strokes as for Grounds, laying it on paler and paler as you deſcend towards the Horizon, which you muſt make of Vermillion and Mine de Plomb, and of White of the ſame Strength as finiſhes the Sky, and even a little weaker, artfully blending the Blue and the Red, which muſt come down to the Front, mingling, at laſt, Gall-ſtone and a good deal of White, ſo that the Mixture may be paler than the firſt; and all this muſt be ſo laid on, that no Separation be ſeen of the Colours of this Sky.

SECT. XXVIII.

When there are to be Clouds in your Sky, you need lay on no Blue where they are to be, but ſketch them

out

out (if they are Reddiſh) with Vermillion, Gall-ſtone and White, together with a little Indigo; and if they happen to be darker, you muſt uſe a great deal of this laſt, making the Lights of one and the other with Maſticoat, Vermillion and White, the Proportions of each more or leſs, according to the Degree of Strength you would give them, or according to the Original before you, ſwelling out the whole with ſtippling, for it is a hard Matter to lay them on uniformly in the Drawing; and if the Sky be not ſufficiently uniform, you muſt ſtipple that likewiſe.

N. B. You may cover alſo the Places of your Clouds in laying on the Ground of the Sky, heightening the Lights with a good deal of White, and deepening the Shades: This is the moſt expeditious Way.

SECT. XXIX.

A Night or ſtormy Sky is made with Indigo, Black and White, mix'd together, which is laid on like the Day Sky. To theſe add Vermillion, Oaker and Brown Red for the Clouds, whoſe Lights muſt be of Maſticoat or Mine de Plomb, and a little White, ſometimes Redder and ſometimes Yellower, as Neceſſity ſhall require: And when it is a ſtormy Sky, and that in ſome parts you ſee Lights, whether Blue or Red, you may order them as in a Day Sky, ſcumbling the whole together in drawing and finiſhing.

CHAP. II.

DRAPERIES.

SECT. I.

TO make a blue Drapery, put Ultramarine near the White on your Pallet, and mix them in ſuch Proportions as to produce a very pale Colour, and of a good Body. With this you may expreſs your brighteſt Lights;

Lights; and afterwards add more Ultramarine for ſuch as are darker, and ſo continue to do to the deepeſt Fold and darkeſt Shades, which muſt be pure Ultramarine; and all this muſt be done with broad Strokes of the Pencil, with a due Regard had to the ſcumbling of the different Degrees of Light and Shade, loſing the Lights into the Shades with a Colour not ſo pale as the Lights, or deep as the Shades. Then ſtipple the whole with the ſame Colours and the ſame Degrees, but ſomewhat ſtrongly, that the points may be ſeen: The whole muſt flow imperceptibly together, that the Folds may not appear cut, and no Line of Separation be ſeen. When the Ultramarine happens not to be dark enough for the deepeſt Shades, how much ſoever it may be gummed, you may mix Indigo with it to give them the laſt Degree of Depth; and if the Lights are not ſtrong enough, they may be heighten'd with White and a very little Ultramarine.

SECT. II.

A Carmine Drapery is done after the ſame Manner with the Blue, except that in the darkeſt places you lay on Vermillion before you uſe the Carmine, which is apply'd without any White, and in the deepeſt ſhades it muſt be well gumm'd. To deepen it the more add a little Biſtre.

SECT. III.

There is alſo another Drapery all of Vermillion, with a Mixture of White for the Lights, laying it on ſingle upon the darkeſt parts, and adding Carmine for the deepeſt Shades. You finiſh then with the ſame Colours, as in other Draperies; and if the Carmine and Vermillion together are not ſtrong enough, take Carmine alone, but only for the deepeſt ſhades.

SECT. IV.

A Drapery of Lake is done like that of Carmine, mixing a good deal of White therewith for the Lights, and

and but very little for the ſhades: You are to finiſh with ſtippling, but we uſe no Vermillion.

SECT. V.

Purple Draperies are made by the ſame Rule, having firſt prepar'd a Mixture of Carmine and Ultramarine, and continually uſing White for the Lights. If you would have it a Columbine or light Purple, your Carmine muſt be in greater Quantity than your Ultramarine; but if you would have it more blue and deep, let there be more Ultramarine than Carmine,

SECT. VI.

For a Fleſh-colour Drapery begin with laying on a very pale Mixture of White, Vermillion and Lake, and ſhade with the ſame Colours, diminiſhing the Quantity of the White. This Drapery muſt be very pale and delicate, becauſe it muſt repreſent a ſlight Stuff, and even the ſhades muſt not be dark.

SECT. VII.

For a Yellow Drapery lay on all over, firſt Maſticoat, and then over that Gamboge, excepting only the lighteſt parts, where you muſt leave the Maſticoat pure. Then you muſt ſhade with Oaker mingled with a little Gamboge and Maſticoat, increaſing and decreaſing the Quantity of this laſt, according to the ſtrength of your ſhades; and when you want to be ſtill darker, add Gall-ſtone. Moreover you may work with Gall-ſtone alone for the deeper ſhades, adding thereto Biſtre if it be not dark enough. You finiſh with the Colours you began with, ſtippling and blending the Lights with the ſhades.

SECT. VIII.

If you uſe Naples Yellow or French Pink inſtead of Maſticoat and Gamboge, you will have another ſort of Yellow.

SECT. IX.

Green Drapery is produc'd by colouring all over with Verditer,

Verditer, with which, if it prove too blue for you, you may mix Maſticpat for the Lights, and Gamboge for the ſhades: Then add a Proportion of Sad Green to ſhade with; and as your ſhades grow very deep, you muſt add the darker Greens, and even uſe them unmix'd, where you want to be extreamly dark. You finiſh with the ſame Colours, a little darker than at firſt.

SECT. X.

For a Black Drapery, you muſt lay on Black and White, and finiſh with the ſame, encreaſing the Black as you want it for the ſhades; for the deepeſt of which add ſome Indigo, eſpecially if you would give your Drapery the look of Velvet. You may in all Caſes touch up your Lights with a brighter Colour.

SECT. XI.

For Drapery of White Woollen Cloth, lay on a Mixture of White, a very little Oaker, Orpiment, or Gallſtone, to give it a yellowiſh Caſt, then ſhade and finiſh with Blue, a little Black, White, and Biſtre mix'd together, adding this laſt for your browneſt ſhades.

SECT. XII.

A light Grey is laid on with Black and White, and finiſh'd with the ſame, made a little darker.

SECT. XIII.

For a minim, dark, brown, tawney, or dun Drapery, lay on Biſtre with White, a little Brown Red, and ſhade with the ſame Mixtute, but let it be a little darker.

SECT. XIV.

There are other ſorts of Draperies, call'd Changeable, becauſe the Lights are of one Colour, and the ſhades of another; theſe are us'd for the Cloathing of Angels, and for other young and gay Figures, as alſo for Scarves, and other light parts of Dreſs, which fall into a Number of Folds and flow to the Wind. Theſe are moſt commonly

commonly Purple, and of theſe there are two ſorts, the one with blue Lights and the other with Yellow.

SECT. XV.

For the former lay on Ultramarine and White very pale for the Lights, and ſhade with Carmine, Ultramarine, and White, the ſame as for a purple Drapery, ſo that only the very brighteſt Lights appear Blue, and even then you muſt ſtipple with Purple, with a large Quantity of White, and ſcumble the whole artfully together.

SECT. XVI.

For the latter, uſe Maſticoat for your Lights, inſtead of Blue, then proceed as for a Drapery of pure Purple, except that you muſt ſtipple and blend the Lights with the Shades, that is the Yellow with the Purple, by the help of a little Gamboge.

SECT. XVII.

Carmine Red is order'd like this laſt, that is, the Lights muſt be Maſticoat, and the ſhades Carmine, and to ſcumble them, you muſt uſe Gamboge.

SECT. XVIII.

Lake Red like Carmine,

SECT. XIX.

Green muſt be order'd in the ſame manner as Lake, continually mixing Verditer with the ſadder Greens for the middling ſhades.

SECT. XX.

Many other Sorts of theſe may be contriv'd at Pleaſure, keeping to the Union of the Colours, not only in one Figure, but alſo in a Group of ſeveral Figures, avoiding, as much as the ſubject will permit, to put Blue next to a Flame Colour, or contraſting Green with Black, and ſo of others that diſagree or afford no proper Union.

SECT.

SECT. XXI.

Other Draperies may be made of ſad, dirty, and brown mixtures and ſimples; and all by the Directions we have already given; and others alſo may be contriv'd, both of broken and complicated Colours, but a Harmony between them muſt be preſerv'd, that they do not offend the Eye. There is no laying down a Rule to guide you in this; you muſt by Experience and Practice, make yourſelf acquainted with the Power and Effect of your Colours, and work accordingly.

SECT. XXII.

Linnens are painted thus: Having drawn your Folds as when you do Drapery, lay on White all over, and then proceed and finiſh with a mixture of Ultramarine, black and white, taking more or leſs of this laſt according to the degrees you want of Light and Shade; and for the deepeſt Folds, take Biſtre and a little White, uſing it ſparingly and with artful Touches: and you may even take the former pure for the deepeſt ſhades, where you muſt expreſs the Folds and loſe them into the reſt.

SECT. XXIII.

They may be made after a different Manner, by laying on all over, a very pale Mixture of Ultramarine, black, and white, and then proceeding in the manner above directed with the ſame mixture, but a little deeper. And when the ſhades are ſtippled and finiſh'd; you muſt heighthen the Lights with pure White, blending them with the firſt Colour or Ground. But of what ſort ſoever you make them, you muſt, when they are finiſh'd, prepare ſome yellowiſh Tints for certain Places, laying them on lightly, as it were a Waſh, ſo as to be tranſparent, and neither to hide the ſtippling nor the ſhades.

SECT. XXIV.

Yellow Linnens are made of White mix'd with a little Oaker, then proceed and finiſh with Biſtre, mixed with

with White and Oaker, and for the deepeſt ſhades with Biſtre alone. Before you finiſh, lay on Tints of Oaker and White here and there, and others of White and Ultramarine, as well upon the ſhades as the Lights, but very thin, and then ſtipple and ſcumble the whole together, and it will have a fine Effect. As you finiſh, touch up the Extremities of the Lights with Maſticoat and White. Theſe Linnens, and the former, you may ſtripe like *Ægyptian* Scarves, with Blue, Red, Ultramarine, and Carmine, a Red one between two Blue ones, very bright on the Lights, and ſtronger in the ſhades. The Heads of Virgins are generally dreſs'd with Veils of theſe Sorts, and of the ſame are made a Sort of Handkerchiefs for an open Breaſt, becauſe they are very becoming to the Fleſh.

SECT. XXV.

When you would have either the one or the other of them to be tranſparent, and ſhew whatever, whether Stuff or Fleſh, is underneath, lay them on at firſt, very thin, and mingle with your ſhading Colour, a little of that which is under them, particularly at the Extremities of the ſhades, and touch only the Extremities of the Lights, (only for the Yellows) with Maſticoat and White, and for the Whites with White alone.

They are alſo to be make another way, eſpecially when you would have them quite tranſparent, as Muſlin, Lawn, or Gauſe. To this purpoſe you muſt begin and finiſh what is beneath as if nothing was to be over it; then heighten the brighteſt Folds with White or Maſticoat, and ſhade with Biſtre, and White; or Black, or Blue and White, according to the Colour you aim at, and taking away from the Livelineſs of the reſt by ſoiling it over, tho' that be not altogether neceſſary but for the darker parts.

SECT. XXVI.

For Crape you muſt do as above, only obſerve that you draw the Folds and the Borders or Edges with little Threads alone, upon what is beneath, which muſt firſt be finiſh'd,

SECT.

SECT. XXVII.

When you would water a Stuff of any ſort, you muſt wave it with lighter or darker Colours, according as what you are upon is Light or Shade.

SECT. XXVIII.

There is ſuch a way of touching your Draperies, ſo as to diſtinguiſh the ſilken from the woollen; theſe are more coarſe and ſtiff, the others are finer, and more free or gloſſy; but it muſt be remember'd that theſe are Effects which depend partly upon the Stuff itſelf, and partly upon the Colour of it; and in order that you may apply them in ſuch a manner as ſhall be agreeable to the Subject and to the Diſtance, I will here dwell a little on their different Qualities.

SECT. XXIX.

We have no Colour that partakes more with Light than White, or that comes nearer to the Air, which ſhews it to be weak and fading, nevertheleſs you may uſe it for the neareſt Parts of your Picture, or bring it out towards you, by the Aſſiſtance of ſome heavier and ſtronger Colour, or by mingling them together.

SECT. XXX.

Blue is the moſt fading, or rather the weakeſt Colour of all, whence the Sky and diſtant Proſpects are of that colour; but it will fade the more, the more it is mix'd with White.

SECT. XXXI.

Pure Black is the heavieſt and the moſt terrene of all, and the more you mix it with other colours, the more will they be of the ſame Nature.

Now the different Natures of Black and White produce different Effects in them; for often the White throws back the Black, and the Black brings forward the White. Under White, we here comprehend all the

light colours, and under Black we ſuppoſe all that are heavy.

Ultramarine is then a colour weak and light.

Oaker is not quite ſo much.

Maſticoat is very light, and ſo is Verditer.

Vermillion and Carmine are next to them.

Orpiment and Gamboge are a little leſs ſo.

Lake holds a mean more kind than rude.

Pink is of no particular Claſs, and eaſily takes the Qualities of the others; ſo you may make it dark and heavy, by mixing it with Colours which are ſo: And on the contrary, faint, weak, or fading, by mingling with it White or Blue.

Brown Red, Umber, the dark Greens, and Biſtre, are the heavieſt and next to Black.

SECT. XXXII.

Able Maſters who are vers'd in Perſpective and the Harmony of Colours, take care always to uſe their ſtrong Colours, for their fore Grounds, and the weaker for diſtant Views. As for the Union of Colours, you may, by mingling them together, underſtand the Friendſhip or Averſion they have for each other, and thence take your Hints, and conſult the Pleaſure of the Eye.

SECT. XXXIII.

For Laces, Point, and the like, lay on firſt a Mixture of Blue, Black, and White, as for Linnens; then heighten the Pattern, Flowers, or Flouriſhes with White only; then ſhade and finiſh with the firſt Colour. When they are upon Fleſh, or ought elſe which you would have to be ſeen through them; finiſh what is under them, as if you intended to lay nothing thereon, and then lay on the Lace or Point, with pure White, and finiſh with the other Mixture.

SECT. XXXIV.

If you would paint a Fur, lay on a Ground, as for Drapery, according to the Colours of it, and then ſhade

by the ſame Rule; and having done, you muſt, inſtead of ſtippling, draw fine ſtrokes, this way, that way, and t'other way, according to the Grain of the Fur you aim at. Heighten the Lights of a Brown Fur with Oaker and White, and thoſe of a light Fur, with White and a little Blue.

SECT. XXXV.

For a Building, if it be Stone, take Indigo, Biſtre, and White, for your dead colouring or ground, and then ſhade with leſs of this laſt, and more of the Biſtre than Indigo, according to the Colour of the Stones you would make; you may alſo add a little Oaker, both to begin with and to finiſh. But to add ſtill to its Beauty, you muſt here and there, eſpecially for Ruins, make yellow and blue Tints, the former of Oaker, and the latter of Ultramarine, always mixing them with white, whether for your firſt Ground, provided they appear through what you lay upon them, or whether you uſe them at laſt, finiſhing and blending them with the reſt.

SECT. XXXVI.

For wooden Buildings, as they are of very different Kinds, they are left to Diſcretion; but the moſt common way is to begin with a Mixture of Oaker, Biſtre, and White, and finiſh without White, or with very little, and when the ſhades require Strength, with Biſtre alone. For others you may add, ſometimes Vermillion, and ſometimes Green or Black, in a Word, according to what you intend, you muſt mix your Colour, and finiſh with ſtippling, as for Draperies and all the reſt.

CHAP.

CHAP. III.

Of Carnations or Fleſh Colouring,

SECT. I.

THERE is ſo great a Variety of colouring for Fleſh, that it is a hard matter to lay down any general Rules for your Inſtruction therein; nor are any Rules minded by ſuch as have acquired a Skill this way; for ſuch copy from Originals, or work by their own Heads, without knowing, particularly, why or wherefore. So that the moſt able Hands, who work on with the leaſt thought and trouble, would be ſo much the harder put to it, were they called upon to aſſign a Reaſon for their Doctrine and Practice as to their Colouring and Tints.

However, as Beginners, for whom this little Work is intended, ſtand in need of immediate Inſtruction, I will here, in general, declare how you are to paint the different ſorts of Fleſh.

SECT. II.

Firſt of all, having drawn your Figure with Carmine and adjuſted your Piece, you muſt lay on, for Women, Children, and, in general, for all ſoft and tender colouring, White mix'd with a very little Blue for Faces, the Compoſition of which will be given hereafter; but it muſt hardly appear.

SECT. III.

And for Men, inſtead of Blue ſubſtitute Vermillion for your dead colouring, and when they are old let it be mix'd with Oaker.

SECT. IV.

Then you are to run over all your Features with Vermillion, Carmine and White mingled together, and with the ſame Mixture form all the ſhades, adding White as they weaken, and ſcarce uſing any of it as they ſtrengthen; but particularly in certain Places, where you muſt lay it on boldly, for Example, at the Corners of the Eyes, under the Noſe, the Ears, under the Chin, between the Fingers, in all the Joints, the corners of the Nails, and generally in every part where it is neceſſary to expreſs a Separation in the dark ſhades: Nor muſt you fear to give them all the ſtrength they ought to have from the firſt Sketch, becauſe in working thereon with Green, it conſtantly weakens the Red which had firſt been laid on.

SECT. V.

Having drawn with Red, make blue Tints with Ultramarine and a good deal of White, upon the Temples, beneath and at the Corners of the Eyes, on each ſide of of the Mouth, above it and below it, a little upon the middle of the Forehead, between the Noſe and the Eyes, on the ſides of the Cheeks, on the Neck, and other parts where the Fleſh has a bluiſh Caſt.

You muſt alſo make yellowiſh Tints with Oaker, Orpiment and a little Vermillion mixed with White, above the Eye-brows, at the ſides of the Noſe towards the bottom, a little beneath the Cheeks, and the other parts near.

In theſe it is that you muſt keep a watchful Eye upon Nature, for Painting being no more than an Imitation of Nature, every Deviation from her is a Blemiſh, and truly a Fault.

SECT. VI.

Having dead coloured, drawn, and diſpoſed of your Tints, you muſt proceed to ſhade, ſtippling with Green for your Fleſh, mixing therewith, according to the Rule we have given for Tints, a little Blue for the fading Parts, and

and on the contrary, a little Yellow for the ſtronger parts, or ſuch as are neareſt to you. On the Extremities of the ſhades next to the Lights, you muſt imperceptibly blend your Colour with the Ground of the Fleſh, firſt with Blue, and then with Red, according to the part you are upon. And if this Mixture of Green do not darken enough at firſt, you muſt go over the ſhades at ſeveral Repetitions, ſometimes with Red ſometimes with Green, and always ſtippling till the whole be as it ought to be.

SECT. VII.

And if with theſe Colours you cannot give your ſhades all the Strength they ought to have, you may finiſh the darkeſt parts with Orpiment, Oaker or Vermillion, and ſometimes with Biſtre only, according to the colouring you would make, but lightly, laying it on very thin.

SECT. VIII.

You muſt ſtipple upon the Lights with a little Vermillion or Carmine, mixed with a good deal of white and a very little Oaker, to loſe them with into the ſhades, and make the Tints imperceptibly die away into each other, taking heed while you are ſtippling or hatching that your ſtrokes follow the out-line of the Fleſh; for altho' your hatching muſt croſs in all Directions, that ought to appear a little more, becauſe it rounds off the parts.

And becauſe this Mixture might make the colouring too Red if it was always uſed, you muſt moreover endeavour to confound the Tints and the Shades with Blue, a little Green, and a great deal of White, ſo that it be very pale; but with this you muſt not work upon the Cheeks, nor upon the Extremities of the Lights, no more than with the other Mixture upon theſe laſt, which are to be left in all their brightneſs, as certain parts of the Chin, of the Noſe, upon the Forehead, and upon the Cheeks, which, and the Chin, ought, however, to be redder than the reſt,

reſt, as well as the Feet, the inſide of the Hands, the Fingers, and the Toes.

Pray obſerve here, that theſe two laſt Mixtures ought to be ſo very pale, that you ſhould hardly ſee yourſelf work, they being purely deſigned to ſoften the Piece, to melt the Tints into each other, to blend the ſhades with the Lights, and to deface the Lines. Be cautious not to make much uſe of the red Mixture upon blue Tints, nor of Blue upon others; but change colour from time to time, as you perceive you work too blue or too red, 'till the Piece be finiſh'd.

SECT. IX.

You muſt ſhade the White of the Eyes with the ſame Blue and a little Fleſh Colour, and make the Corners on the ſides of the Noſe with Vermillion and White, with a ſmall ſtroke of Carmine. All this is ſoftened with that Mixture of Vermillion, Carmine, and White, and a very litt'e Oaker.

The Iris of the Eye muſt be a Mixture of Ultramarine and White, this little more in Quantity than the other, adding thereto a little Biſtre, if it is to be of a Kind of light Hazel, or a little Black if it is too Grey. The Pupil or Sight of the Eye is done with Black, and the Iris is ſhaded with Indigo, Biſtre, or Black, according to the Colour it is of; but of what colour ſoever it is, you would do well to draw a fine Circle of Vermillion round the Sight, which blended with the reſt, in finiſhing, gives Life to the Eye.

The Circumference of the Eyes, that is, the Slit and the Laſhes, muſt be done with Biſtre and Carmine, when they are ſtrong. particularly the upper part, which muſt be afterwards ſoftened with the Red or Blue Mixtures, I formerly mentioned, that the whole appear of a Piece and continu'd.

When this is done, give a ſmall Touch of pure White upon the Sight of the Eye, next to the Light, which makes it ſhine and alive.

You may alſo heighten the White of the Eye next to the Light.

SECT.

SECT. X.

The Mouth muſt be Vermillion mix'd with White, and finiſh'd with Carmine, which is ſoftned like the reſt: And when the Carmine, does not prove dark enough for your purpoſe, mix Biſtre with it: This is to be underſtood of the Corners, between the Lips, and particularly for ſome half open Mouths.

SECT. XI.

The Hands and the other Nudities are to be done as the Faces, obſerving that the Tip or End of each Finger be redder than the reſt. Your work being colour'd and ſtippled, you muſt go over all the Separations of the Parts with fine Touches of Carmine and Orpiment together, as well in the Shades as in the Lights, but ſtronger in the firſt; and then handle them away into the reſt of the Fleſh.

SECT. XII.

The Eye-brows and the Beard, are colour'd like the Shades of the Fleſh, and are finiſh'd with Biſtre, Oaker, or Black, according to the colour they are of, drawing them with fine ſtrokes as they ought to lie, in exact imitation of Nature; and the Lights muſt be heighten'd with Oaker, Biſtre, a little Vermillion, and a good deal of white.

SECT. XIII.

For Hair, lay on Biſtre, Oaker, White, and a little Vermillion, but when it is very dark you muſt uſe Black inſtead of Oaker, and then ſhade with the ſame Mixture, diminiſhing from the white, and finiſh with Biſtre alone. or mix'd with Oaker or Black, by fine thin Strokes, very near to each other, waving and curling them according to the turn of the Hair. You muſt alſo refreſh the Lights, with fine Strokes of Oaker, or Orpiment, or White, and a little Vermillion; after which blend away the Lights into the Shades, working ſometimes with brown and ſometimes with pale.

As for the Hairs upon and round the Forehead through which the Fleſh is ſeen, you muſt colour them with the Colour of Fleſh, ſhading and working beneath as if you intended there ſhould be none; then ſhape them, and finiſh them with Biſtre, and refreſh the Lights as you did the reſt.

Grey Hairs are colour'd with White, Black, and Biſtre, and finiſhed with the ſame Mixture, but ſtronger, heightening the Lights with a very pale blue and white.

SECT. XIV.

But the Matter of the greateſt Importance is to ſoften the Work, to run the Tints into one another, as well as the Hair on and about the Face into the Fleſh, taking eſpecial Care that you work not dry or hard, and that the Out lines of your Fleſh be not cut.

You muſt accuſtom yourſelf to mix with White, but juſt as you want more or leſs of it, for the ſecond colouring muſt be always a little deeper than your firſt, except it be for ſoftning.

SECT. XV.

The various Colourings may be eaſily produc'd by taking more or leſs Red, Blue, Yellow, or Biſtre, whether for your firſt colouring or for finiſhing. The Colouring for Women ſhould be bluiſh, for Children a little Red; both Freſh and gay; and for the Men it ſhould incline to Yellow, eſpecially when they are old.

SECT. XVI.

To make a Colouring to repreſent Death, you muſt firſt clap in White, Orpiment, and Oaker, very pale, and then proceed with Vermillion and Lake, inſtead of Carmine, and a great deal of White; and work thereon with a green Mixture, in which is more blue than of any other Colour, that the Fleſh may be livid. The Tints muſt be the ſame as for another Colouring; but you muſt have more of them blue than yellow, particularly for

for the retreating Parts, and about the Eyes; and the Yellow muſt be us'd only for the Parts which advance the fartheſt out. They are made to die away into each other, after the uſual manner, ſometimes with a very pale blue, and ſometimes with Oaker and White, and a little Vermillion, ſoftning the whole together. You muſt round off the Parts and the Out-lines with the ſame Colours.

The Mouth muſt be almoſt a Purple; but nevertheleſs you begin upon it with a little Vermillion, Oaker and White, but you finiſh it with Lake and Blue; and for the ſtrong Strokes you take Biſtre, and Lake, which are uſed alſo for the Eyes, the Noſe and the Ears

If it is a Crucifix or ſome Martyr, where there muſt be an Appearance of blood; after the Fleſh is finiſhed you muſt colour with Vermillion and finiſh with Carmine, ſwelling out the Drops of blood, and giving them a roundneſs.

As for the Crown of Thorns, lay on Sea-green and Maſticoat, and ſhade with Biſtre and Green, and refreſh the lights with Maſticoat.

SECT XVII.

Iron is coloured with Indigo, and a litte black and white, and finiſhed with Indigo alone, heightening with white.

SECT. XVIII.

For Fire and Flames, the lights muſt be Maſticoat and Orpiment, and for the Shades, mix Vermillion and Carmine.

SECT. XIX.

Smoke is imitated with Black, Indigo, and White, and ſometimes Biſtre. You may alſo add Vermillion, or Oaker, according to the Colour you would have it of.

SECT. XX.

For Pearls, lay on a Mixture of White and a little blue, and ſhade them and ſwell them with the ſame, but a little ſtronger. Lay on a ſmall white Spot juſt in the middle of the light Side, and on the other, between the Shade and the Border of the Pearl, give a touch of Maſticoat to make a Reflection; underneath you muſt give them a caſt of the Colour they are upon.

SECT. XXI.

Diamonds muſt be laid in quite Black, then heightened with gentle touches of White on the light ſide.

The ſame muſt be done for all other precious Stones, only varying the Colour.

SECT. XXII.

For a Gold Figure, lay on Shell-Gold, and ſhade with Gall ſtone.

Do the ſame for Silver, only ſhade with Indigo.

SECT. XXIII.

Thus have I dwelt upon ſome ſmall Articles for the Aſſiſtance of Beginners. What I have ſaid may afford ſome light into what I have not ſaid, by the help of Time and Practice, which are much required to attain any degree of Perfection in our Art. One excellent way to become a Maſter is copying after well-choſen Originals: It is with Pleaſure we reap the Fruit of the Labours of others. Much is required to be able to produce ſuch fine Effects: In ſhort, it is far better to be a good Copiſt than a bad Inventor.

The Inſtructions I have laid down for the Mixtures, and the different Tints, for the finiſhing of Fleſh and other Things, may be of particular Uſe when you work after Prints, where you have nothing before you but black and white; and they will not be much more unuſeful when you begin to copy after Paint, tho' you know not how to handle your Colours, and happen not to be acquainted with their Power and Effect; For there

is this difference between Miniature and painting in Oil, that in this laſt the Colours were taken off from the Pallet juſt as they appear to you in the Picture; ſo that in this Caſe you have nothing to conſult but ſuch a light and ſuch a ſhade. Now it is far from being the ſame in Miniature, where often it happens that the laſt colouring you lay on does not preſerve its colour, but partakes of the colouring beneath, or rather, the one than the other compoſe a new one to form the Effect you aim at: For altho' it be White, Green, Carmine, Blue, Orpiment, Biſtre, and the like, which form your colouring, they nevertheleſs would not produce it if they were mixed together; for it is by proceeding from one to the other, that you can ſucceed; and when you have a piece of this Kind before you without having ſeen how it was done, you muſt be a Conjurer, at leaſt, to gueſs at the Order and Method it was done in, without the help of a Maſter or a Book. Upon this Conſideration, I have applied my ſelf to inſtruct you in ſo many ſmall Matters, and I flatter my ſelf that Experience will evince to all ſuch as are able to make Uſe of them, that as ſmall as they are, they are valuable.

CHAP. IV.

Of *LANDSCAPES.*

SECT. I.

IT is particularly for Landſcapes that you muſt be mindful of the 58th Article, and of the following, which ſpeak of the various Qualities of Colours, becauſe the Order and Diſpoſition of them contributes much to the Retreats and Diſtances which deceive the Eye: And the greateſt Maſters in this branch of the Art have ever obſerved to cover their fore Fronts with the heavieſt and ſtrongeſt Colours, reſerving the lighter for Diſtances.

But

But that I may not err from my purpoſe, I will, inſtead of general Inſtructions, endeavour to give beginners ſome particular Documents to be obſerved in Practice.

SECT. II.

Firſt of all, having drawn your Landſcape ſuch as you would have it, as for another Picture, you muſt colour your neareſt Fronts, if they are to be dark, with Sap Green, Iris Green, Biſtre, and a little Verditer, to give your Colour a Body. You muſt ſtipple with this Mixture, but let it be a little darker, adding thereto, ſometimes, black.

For the lighter Fronts, lay on Oaker and White, then ſhade and finiſh with Biſtre: In ſome you ſhould mingle a little Green, eſpecially for ſhading and finiſhing.

Sometimes you have reddiſh Fronts, which muſt be made of Brown-red, White, and a little Green, and finiſhed with the ſame, with the Addition of a little more Green.

For Graſs and Herbage on your neareſt Fronts, you muſt, after they are drawn, colour them with Sea-Green, Verditer, and a little White; and for ſuch as are yelloviſh, you muſt mingle Maſticoat, and then ſhade with Iris Green, or Biſtre, and Gall-ſtone, if you would have them appear dead and withered.

The Fronts at ſome diſtance muſt be coloured with Verditer, then they muſt be ſhaded and finiſhed with Sap Green, and add Biſtre to give a touch with here and there.

Such as are ſtill farther off are made of a Sea Green, a little Blue, and a little White; and are ſhaded with Verditer.

The further they are off, the more bluiſh they muſt be; and the utmoſt Verge ſhould be Ultramarine, and White, mixing in certain Places fine Tints of Vermillion.

SECT. III.

Waters are painted with Indigo and White, and ſhaded with the ſame, but it muſt be ſtronger; and to finiſh them

them you muſt, inſtead of ſtippling, draw waving Strokes when neceſſary, or ſtrait without croſſing, for a ſtill Water. You muſt ſometimes uſe a little Green, and heighten the Lights with pure White, particularly where the Water bubbles up.

You muſt proceed with Rocks as with Stone Architecture, except that you mingle a little Green in your colouring and ſhading. In this Caſe your Tints muſt be yellow and blue, and in finiſhing muſt be ſcumbled into the reſt: And when you make little branches with Moſs on them, or Herbs of any ſort, you muſt, when you have done, touch them up with Maſticoat and Green. You may make ſome Yellow, ſome Green, and ſome Reddiſh, as upon the near Fronts. Rocks muſt be ſtippled like the reſt; and the farther they are off, the grayer muſt they appear.

Caſtles, old Ruins, and buildings of Stone and Wood, muſt be ordered as I have already directed, when they are upon the fore Fronts; but when they are at a Diſtance, you muſt add Brown Red and Vermillion, with a great deal of White, and ſhade very tenderly with this Mixture; and the farther they are off, the tenderer muſt the Strokes be for the Separations. As they are generally ſlated you may make the Roofs a little bluer than the reſt.

SECT. IV.

The Trees are not touched till the Sky is finiſhed; ſo that when you are about the Sky, you may, if you will leave room for them, eſpecially if they are to be many in Number. But which way ſoever you order this, you muſt cover ſuch as are neareſt to you with Verditer, adding, ſometimes, Oaker to it; then ſhade with the ſame Colours and a little Iris Green; then leaf them with ſtippling without croſſing; for it muſt be done with ſlight longiſh touches, of a darker and warmer Colour, which muſt all be directed to humour the Branches, by little Tufts of a ſomewhat darker Colour, as we have ſaid. Then touch up the Lights with Verditer and Maſticoat, forming your Leaves after the ſame Manner; and when there are withered Leaves or Branches, cover them with

Brown-

Brown red, or Gall-ſtone and White, and finiſh with Gall ſtone without White, or Biſtre.

The Trunks of Trees muſt be cover'd with Oaker, White, and a little Green for the Lights; and for the Shades, mingle with Black, adding Biſtre and Green for the one and for the other. Your Tints muſt be yellow and blue; and here and there you muſt beſtow tender touches of White or Maſticoat, to imitate what you commonly ſee in the Bark of Trees.

The Branches which appear between the Leaves muſt be Oaker, Verditer and White, or Biſtre and White, according to your degree of Light. You muſt ſhade with Biſtre and Iris Green.

Trees at a Diſtance are covered with Verditer and Sea-green, and are ſhaded and finiſh'd with the ſame Colours mixed with Iris Green. When there are any that appear yellowiſh, they may be cover'd with Oaker and White, and finiſh'd with Gall ſtone.

For thoſe at the greateſt Diſtance, and very far off, cover with Sea-green, and, to finiſh, mix with it Ultramarine; heighten the one and the other with Maſticoat in little diſtinct Leaves.

It is the moſt difficult Thing in Landſcape Painting, and likewiſe in Miniature, to leaf a Tree as it ought to be. To obtain this Art you muſt break your Hand to it a little by copying good Originals; for it requires a peculiar Manner of touching, which cannot be attained but by working after Trees themſelves, around which you will take care alſo to have little Branches or Sprays, which you muſt leaf upon whatſoever they happen to lye, whether the Sky or the Ground of the Landſcape in general.

And in general your Landſcape muſt be properly colour'd, and full of Truth, for therein conſiſts its beauty.

CHAP.

CHAP. V.

Of *FLOWERS.*

SECT. I.

IT is moſt charming to paint Flowers, not only becauſe of their Luſtre, but alſo becauſe they take up but a little Time, and require hardly any Pains to do them: It is all Pleaſure and no Trouble. You ſpoil a Face if you make one Eye a little higher than the other, if you make a ſmall Noſe or a large Mouth, and ſo on of the other Features: But the fear of theſe diſproportions never troubles the Mind when you are about Flowers; for except they be quite out of the way indeed you ſpoil nothing; and accordingly moſt of the Quality who apply themſelves to painting, concern themſelves with nothing but Flowers. You muſt, however, learn to copy a little axactly; and for this Branch of Miniature, as well as for the reſt, I refer to Dame Nature as your only Guide. Work then after natural Flowers, and ſearch for their Tints and various Colours upon your Pallet; a little Uſe will eaſily bring you to be expert in this; and in order to pave the way for you at firſt, I will ſhew you, continuing my Deſign, how to paint ſome of them. It is not always you can have natural Flowers, and you may be often obliged to copy from Prints where you ſee nothing but Graving.

SECT. II.

It is a general Rule that Flowers be drawn and covered like other Figures; but the manner of colouring and finiſhing them is different; for they are coloured with broad Strokes or Touches, which have the turn the ſmaller muſt have, with which you finiſh, this firſt turn being a principal help. And to finiſh, inſtead of ſtipling or hatching, you draw fine Strokes very cloſe to each

each other without croſſing, going over them at ſeveral Repetitions, till your Lights and Shades have all the Strength you would give them.

SECT. III.

ROSES.

Having calked and drawn the red Roſe with Carmine, let your firſt Lay be a very pale Mixture of Carmine and White; then lay in the Shade of the ſame Colour, but with leſs White, and at laſt uſe Carmine alone, but it muſt be very thin at firſt, adding, however, to the body of it more and more, as the piece advances, and that the ſhades grow darker and darker, and this is to be done with broad bold Strokes. To conclude, you finiſh with the ſame Colour, with fine Strokes, which muſt be turned like thoſe of the Graving, if you copy after a Print, or like the turn of the Leaves of the Roſe, if you copy after a Painting or Nature; ſcumbling the whole, and touching up the ſtrongeſt Lights, and the Edges of the brighteſt Leaves, with White and a little Carmine. You muſt always make the Heart of the Roſe, and the ſhady Side, darker than the reſt, and uſe a little Indigo in ſhading the firſt Leaves, eſpecially when your Roſes are blown, to make them appear a little fading. The Seed is done with Gamboge, mixed with a little Bladder Green for ſhading.

Your ſtreaked Roſes muſt be paler than the others, that the Streaks may be the more conſpicuous; which muſt be done with Carmine, ſomewhat deeper in the Shades, and very bright in the Lights, hatching continually with fine Strokes.

For white Roſes lay on white, and proceed and finiſh as in the Example of red Roſes; but with Black, White and a little Biſtre, and make the Seed ſomewhat yellower than before.

For yellow Roſes lay on Maſticoat, and ſhade with Gamboge, Gall-ſtone and Biſtre, heightening the Lights with Maſticoat and White.

The Stalks, the Leaves, and the Buds of all ſorts of Roſes, muſt be laid in with Verditer, mixed up with a little

ſittle Maſticoat and Gamboge; and to ſhade them, uſe Iris Green, with leſs of the other Colours when the ſhades are deep. The wrong Side of the Leaves muſt be bluer than the other, therefore you muſt there lay on Sea-Green, and mix it with Iris-Green to ſhade with, making the Veins or Ribs of that Side lighter than the Ground, and thoſe of the right Side deeper.

The Prickles upon the Stalks and the Buds of the Roſes, are made with ſlight touches of Carmine in all Directions, and thoſe on the Stem of the Tree and larger Branches are ſtruck in with Verditer and Carmine, and ſhaded with Carmine and Biſtre, making alſo the bottom of the Stems and Stalks more reddiſh than the Tops, that is, you muſt mix Green with Carmine and Biſtre to ſhade with.

SECT. IV.

Of TULIPS.

As there are infinite ſorts of Tulips, at leaſt too many to be all traced out, I ſhall touch only on the fineſt, which are call'd ſtriped or ſtreaked. Their Stripes or Streaks are laid in with Carmine, very thin in ſome Places and very deep in others, and they are finiſh'd with fine Strokes of the ſame Colour, which muſt all obſerve the turn of the Stripes. For others, you begin with Vermillion, then proceed by mixing it with Carmine, and finiſh with Carmine only.

For others again, you lay Indian Lake upon Vermillion inſtead of Carmine.

Some alſo are coloured with Lake and Carmine mixed together, and Lake only, or with White to begin with.

Some of them are of a Violet or Purple Colour, and are to be done with Ultramarine, and Carmine or Lake, ſometimes bluer and ſometimes redder. The manner of ordering both is juſt the ſame, there is no difference but in the Colours.

You muſt in certain Places, as for Example, between the ſtripes of Vermillion, Carmine, or Lake, put ſometimes a blue made of Ultramarine and White, and ſometimes

times a tranſparent Purple, which muſt be finiſh'd with fine hair ſtrokes like the reſt, and ſcumbled into the Stripes. Some there are that have ſallow Tints, which are made of Lake, Biſtre, and Oaker, according as they happen to be; theſe are only for fine and uncommon Tulips.

To ſhade the Ground of thoſe whoſe Stripes are Carmine, take Indigo and White.

For thoſe that have Lake Stripes, take black and white, therewith ſometimes mixing Biſtre, at other times green.

Some alſo you may ſhade with Gamboge and Umber, and always with fine hair ſtrokes, that follow the turn of the Leaf.

Others alſo may be painted, which we call edged. This Tulip is all of one Colour, excepting the border, which is white with purple.

Red with Yellow.

Yellow with Red.

And Red with White.

The purple Tulip of this bordered ſort, is laid in with Ultramarine, Carmine, and White, and you muſt with the ſame, ſhade and finiſh. The edge or border muſt not be touched, that is, you muſt only lay on a thin White, which muſt be ſhaded with a very thin Indigo.

The yellow is colour'd with Gamboge, and is ſhaded with the ſame Colour, Oaker, Umber or Biſtre. The edging muſt be Vermillion, and finiſh'd with a very little Carmine.

The red is laid in with Vermillion, and finiſh'd with the ſame Colour, adding thereto Carmine or Lake. The border muſt be Gamboge, and to finiſh, add to it Gallſtone, or Umber, or Biſtre.

The white is to be ſhaded with black, blue, and white; Indian Ink is very proper in this Caſe, for it ſhades ſoft, and is alone equal to the Effects of blue and white, mix'd with other black. The edging of this white Tulip muſt be Carmine.

For all theſe ſorts of Tulips you muſt, in the middle of the Leaves, expreſs a Nervure, which muſt be much brighter than the reſt; and you muſt ſcumble the edges into the Grounds, by fine ſtrokes, for they muſt not ſeem cut or ſeparated like the ſtripes.

Others there are of ſtill different Colours. When you meet with any which are as it were black with inſide, you colour and finiſh them with Indigo, as well as the Seed. If the Ground be yellow take Gamboge, and finiſh by adding thereto Umber, or Biſtre.

The Leaves and Stalks of Tulips are commonly painted with a Sea Green, and ſhaded and finiſh'd with Iris-Green, with broad ſtrokes along the Leaves. Some alſo may be made with Verditer mix'd with Maſticoat; and theſe may be ſhaded with Bladder Green, that they may be of a more yellowiſh Caſt.

SECT. V.

Of ANEMONIES.

There are many ſorts of this Flower as well double as ſingle, which laſt are commonly plain, and are either Purple, with Purple and White, ſhaded with the ſame Colour, ſome bluer, ſome redder, ſometimes very pale, and ſometimes very deep.

Others are coloured with Lake and White, and finiſh'd with the ſame, diminiſhing the White, or even uſing none at all.

Others again are coloured with Vermillion, and ſhaded with the ſame Colour, deepen'd with Carmine.

Others once more, are White, and Lemmon-colour. Theſe laſt are done with Maſticoat, and both the one and the other muſt be ſhaded and finiſh'd, ſometimes with Vermillion, and ſometimes with a very deep Lake, and eſpecially at the bottom of the Cup about the Seed, which is alſo often of a blackiſh Colour, and is imitated with Indigo, or with black and blue, mingling in ſome a little Biſtre, and working continually with fine ſtrokes, and ſcumbling the ſhades into the lights.

There are ſome that have the bottom of the Cup much brighter than the reſt, and even ſo as to be quite white, altho' the reſt of the Anemony be deep.

The Seed of all theſe Anemonies is imitated with Indigo and Black, with a very little White. Shade with Indigo alone; ſometimes it muſt be heighten'd with Maſticoat.

Double Anemonies are of very various Colours, but the fineſt of them have their largeſt Leaves ſtrip'd. Some of theſe Stripes are perform'd with Vermillion, to which is added Carmine to finiſh them, ſhading the reſt of the Leaves with Indigo. For the ſmaller Leaves within, lay on a Mixture of Vermillion and White, and ſhade them with Vermillion mixed with Carmine; and here and there be very ſtrong, particularly in the Heart or Cabbage, near the great Leaves on the ſhady Side, and finiſh with hair Strokes of Carmine, which muſt humour the Stripes and the turn of the Leaves.

The Stripes of others are coloured and finiſhed with Carmine only, as well as the inner or ſmaller Leaves; obſerving, however, to leave, in the midſt of theſe laſt, a little round, where you muſt lay in a deep Purple or Violet, which muſt be ſcumbled into the reſt; and the whole being finiſhed, lay on broad Strokes of this ſame Colour around the ſmaller Leaves, eſpecially on the dark Side, and ſcumble them into the greater, which muſt, for the reſt, be ſhaded with Indigo, or Black.

In ſome others the ſmaller Leaves are of Lake or Purple, altho' the Stripes of the greater be Carmine.

There are others whoſe Stripes are Carmine in the middle of moſt of the largeſt Leaves, with Vermillion under it in ſome Places, all which muſt be ſcumbled into the Shades of the Ground, which are of Indigo and White. The ſmaller Leaves are laid in with Maſticoat, and are ſhaded with a very deep Carmine on the dark ſide, and a very bright Carmine on the light ſide, leaving here the Maſticoat almoſt to itſelf, and only dividing the Leaves with fine touches of Orpiment and Carmine, which ſmaller Leaves may be ſometimes ſhaded with a little very pale Green.

There are double Anemonies all Red, and of a Violet Colour; the firſt are coloured with Vermillion and Carmine, with hardly any White, and are ſhaded with Carmine alone, well gumm'd, that they may be very deep.

Purple Anemonies are imitated with Purple and White, and are finiſhed without White.

In ſhort, there are of all Colours of theſe double Anemonies as well as of the ſingle, which are to be painted by the Rules here ſuggeſted.

The Green of both the one and the other muſt be Verditer mixed with Maſticoat for the dead colouring, and it muſt be finiſh'd with Bladder Green. Their Stalks incline to be a little reddiſh; therefore they are ſhaded with Carmine mixed with Biſtre, and ſometimes with Green, after they are laid in with Maſticoat.

SECT. VI.

Of PINKS and CARNATIONS.

It is the ſame with Pinks and Carnations as with Anemonies and Tulips, for ſome of them are variegated or mixed with ſeveral Colours, and ſome are of one Colour alone.

The firſt are ſometimes ſtreak'd, ſtrip'd or mark'd, ſometimes with Vermillion and Carmine, and ſometimes with Lake and Carmine, at other times with pure Lake, or with White. Some are deep, others are pale. Sometimes they are variegated with ſmall or narrow Strokes, ſometimes with broad or great.

Their Grounds are commonly ſhaded with Indigo and White.

There are ſome of theſe Flowers of a very pale Fleſh Colour, and variegated with another deeper, made of Vermillion and Lake.

Others are of Lake and White, which are ſhaded and variegated without White.

Others again are all Red with Vermillion and Carmine, as deep as poſſible.

Others, once more, are all Lake.

In ſhort, others there are of great Variety, which Nature herſelf, or your own Fancy, can beſt guide you to.

The Green of all of them if of the Sea Hue, which ſhade with Iris-Green.

SECT. VII.

Of the MANY-FLOWER'D LILY.

Let your firſt Colour be Mine de Plomb, the Vermillion, and in the ſtrongeſt of the Shades Carmine; and finiſh with the ſame in ſtrokes which correſpond with the turn of Leaf. Heighten the Lights with Mine de Plomb and White, and imitate the Seed with Vermillion and Carmine.

The Greens muſt be Verditer, ſhaded with Iris-Green.

SECT. VIII.

Of the DAY-LILY.

There are three Sorts of this Flower:
Gridelin, a little Reddiſh,
Gridelin, very pale,
And White.

For the firſt lay on Lake and White, and ſhade and finiſh with a deeper Mixture of the ſame, adding thereto a little Black to ſadden it, eſpecially for the deepeſt Places. For the ſecond lay on White, mix'd with a very little Lake and Vermillion, ſo that theſe two laſt do hardly appear; then ſhade with Black and a little Lake, obſerving to be redder in the Heart of the Leaves next to the Stalk, which, as well as the Seed, muſt be of the ſame Colour, particularly towards the Top, and lower a little greener.

The Stalk of the Seed muſt be Maſticoat, ſhaded with Bladder-green.

The other Flowers of this ſort are laid on with White only, and are ſhaded and finiſhed with Black and White.

The

The Stalk of theſe laſt, and the Green of them all, muſt be of the Sea ſort, ſhaded with Iris-Green.

SECT. IX.

Of HYACINTHS.

They are of four ſorts :
A deepiſh Blue,
A paler Blue,
Gridelin,
And White,
The firſt muſt be Ultramarine and White, ſhaded and finiſhed with leſs white.

The ſecond muſt be of a paler blue.

The third muſt be Lake and White, and a very little Ultramarine, and muſt be finiſh'd with the ſame Colour, but of a deeper Degree.

In ſhort, the fourth muſt be all White, and then ſhaded with Black and a little White ; finiſh with ſtrokes of the ſame turn with the Out line of the Leaf.

The Green and Stalk of the blue Kind, muſt be of the Sea ſort, ſhaded with a deep Iris ; and in the Stalk of the firſt you uſe a little Carmine, to give it a reddiſh Caſt.

The Stalks of the two others, and their Greens, muſt be coloured with Verditer and Maſticoat, ſhaded with Bladder Green.

SECT. X.

Of the PIONY.

Let your firſt Lay in general be of Indian Lake and White, of a pretty good Body ; and then ſhade with a leſſer Quantity of white. which you muſt quite diſuſe in the deepeſt Places ; this done, finiſh with ſtrokes of the ſame Colour in the manner we have ſo often intimated, charging it ſtrongly with Gum in the darkeſt ſhades, and heightening the lights and edges of the brighteſt Leaves, with White and a little Lake : You muſt alſo expreſs ſmall Veins juſt like the ſtrokes of hatching, but they muſt appear more.

The

The Green of this Flower muſt be of the Sea kind, and ſhaded with the Iris.

SECT. XI.

Of COWSLIPS.

They are of four or five Colours:
Of a very pale Purple,
Of Gridelin,
Of White and Yellow.

The Purple muſt be laid on with Ultramarine, Carmine and White, obſerving to diminiſh the Quantity of this laſt when you are ſhading.

The Gridelin-coloured muſt be painted with a light Lake, a very little Ultramarine, and a great deal of White. Shade with the ſame, but let it be darker.

For the white Sort, let it be white alone, and ſhade with black and white Strokes.

The Eye of theſe three Cowſlips, muſt be done with Maſticoat, in form of a Star, which is ſhaded with Gamboge, and muſt, in the midſt of it, have a ſmall Round of Bladder-green.

The yellow Cowſlip, muſt be Maſticoat, ſhaded with Gamboge and Umber.

The Buds, and Leaves, the Stems, muſt be Verditer mixed with a little Maſticoat, and finiſhed with Iris-green, with this ſame Colour expreſſing Ribs or Veins on the Leaves, and heightening the Lights of the largeſt with Maſticoat.

SECT. XII.

Of the RENUNCULUS.

There are many ſorts of this Flower, the fineſt of which are Reddiſh and Orange-colour'd. For the firſt, uſe Vermillion, with a very ſmall Quantity of Gamboge; add Carmine to ſhade with, and finiſh with this laſt Colour, and a little Gall ſtone.

For others, uſe Indian Lake inſtead of Carmine, but eſpecially at the Heart.

The Orange coloured, may be imitated with Gamboge, finiſhed with Gall-ſtone, Vermillion, and a little Carmine, leaving ſome yellow Stripes and Spots.

The Green of the Stalks, is Verditer and Maſticoat very pale, to which muſt be added Iris-green to ſhade with.

The Leaves muſt be of a deeper Green.

SECT. XIII.

Of the CROCUS.

It is of two Colours:
The Yellow,
And the Purple.

The Yellow is done with Maſticoat and Gall-ſtone, ſhaded with Gamboge and Gall-ſtone; expreſſing on the Outſide of each Leaf, three Lines or Rays, ſeparate from and parallel to each other, with Biſtre and pure Lake, which muſt be ſcumbled into the Strokes of the Ground or Leaf. The inſide of the Leaves muſt be all Yellow.

For the Purple, lay on Carmine, mixed with a little Ultramarine and White; expreſſing deep Purple Stripes on ſome of the Leaves, as you did for the Yellow; and on others only fine Veins. The Seed of all is Yellow, and muſt be done with Orpiment and Gall ſtone; and for the Stalk, lay on White, and ſhade with Black, mixed with a little Green.

The Green of this Flower is a pale Verditer, ſhaded with Bladder green.

SECT. XIV.

Of the IRIS.

The Perſian or Indian Iris is done by covering the innermoſt Leaves with White, and ſhading them with Indigo and Green mixed together, and leaving a ſmall White ſeparation in the middle of each Leaf. On the outermoſt Leaves, you, in the ſame Part, put on a lay of Maſticoat, which muſt be ſhaded with Gall-ſtone and

Orpiment, making ſmall deep and longiſh Dots or Spots, at ſome ſmall Diſtance from each other, upon the upper Side of all the Leaf; and at the End of each Leaf make large Spots of Biſtre and Lake for ſome, and of Indigo alone for others, but very deep. The reſt, and the outſide of the Leaves muſt be ſhaded with Black.

The Green muſt be of the Sea ſort and Maſticoat, very pale, and ſhaded with Bladder green.

Another ſort of Iris is laid on with Purple and White, mixed up with a little more Carmine than Ultramarine, and for the ſhades, but eſpecially for the middle Leaves, be mindful to diminiſh the Quantity of White, and on the contrary to what has been ſaid, let the Ultramarine prevail over the Carmine, expreſſing Veins with this ſame Colour, and leaving in the middle of the Leaves within-ſide a ſmall yellow Nervure.

Others there are that have this ſame Nervure on the firſt Leaves, whoſe end only is bluer than the reſt.

Others again are ſhaded and finiſhed with a redder Purple, and have alſo a Nervure in the middle of the Leaves without; but it is white and ſhaded with Indigo.

Some of them are Yellow, and are done with a lay of Orpiment and Maſticoat, ſhaded with Gall ſtone, with Veins of Biſtre on the Upper ſide of the Leaf.

The Greens of them all, muſt be of the Sea-colour, which muſt be mixed with a little Maſticoat for the Stems and Stalks, and ſhaded with Bladder-green.

SECT. XV.

Of JESSEMIN.

Is done with a lay of White; ſhaded with black and white. For the outſide of the Leaves add a little Biſtre, giving the half of each, on that ſide, a faint reddiſh caſt with Carmine.

SECT. XVI.

Of the TUBEROSE.

Lay on white, and ſhade with black, and a little Biſtre in ſome Places; and for the outſide of the Leaves, mix a little Carmine to give them a reddiſh Tint; particularly towards the Ends.

The Seed muſt be Maſticoat; ſhaded with Bladder-Green.

The Green of the Leaves and Stalks muſt Verditer; ſhaded with Iris-green.

SECT. XVII.

Of HELLEBORE.

The Flower of Hellebore is done by almoſt the ſame Rules we have given for the Tuberoſe; that is, it is laid on with White, and ſhaded with Black and Biſtre, making the outſide of the Leaves a little reddiſh here and there.

The Seed muſt be a deep Green heightened with Maſticoat.

Its Green is ſad, and is imitated with be Verditer, Maſticoat, and Biſtre; finiſhed with Iris-green and Biſtre.

SECT. XVIII.

Of the LILY.

Be covered with White, and ſhade with black and white.

The Seed; Orpiment and Gall ſtone.

The Green; like that of the Tuberoſe.

SECT. XIX.

Of the SNOW-DROP.

Cover and finiſh as for the Lily.

Let the Seed be Maſticoat, ſhaded with Gall-ſtone.

Let the Green be Verditer and Iris.

SECT. XX.

Of the JUNQUIL.

Lay on Maſticoat, and Gall-ſtone; finiſh with Gamboge, and Gall-ſtone.

The Leaves and Stalks; Sea-green, ſhaded with Iris-green.

SECT. XXI.

The NARCISSUS.

For all of this Flower, of the Yellow ſort, whether double or ſingle, let your firſt lay be Maſticoat, then Gamboge; and finiſh by adding thereto Umber, or Biſtre, excepting however, the Cup or Bell in the middle, which muſt be done with Orpiment and Gall-ſtone, and edged with Vermillion and Carmine.

For the White ſort, be covered with White, and ſhade with Black and White; excepting the Cup aforeſaid, which muſt be done with Maſticoat and Gamboge.

The Green; Sea, ſhaded with Iris.

SECT. XXII.

The MARIGOLD.

Let your firſt lay be Maſticoat, the ſecond, Gamboge, and ſhade with this laſt, mingled with ſome Vermillion. To finiſh, add Gall ſtone and a little Carmine.

The Green; Verditer, ſhaded with Iris.

SECT. XXIII.

The FRENCH MARIGOLD.

Lay on, firſt, Maſticoat; ſecondly, Gamboge; then proceed with Gall ſtone mixed with this laſt; finiſh with this laſt Colour, adding thereto Biſtre, and a very little Carmine for the deepeſt ſhades.

SECT. XXIV

The AFRICAN MARIGOLD.

Lay on Gamboge; ſhade with the ſame, mixing therewith

with a good deal of Carmine, and a little Gall-ſtone; but about the Leaves make an Edging of Gamboge, very bright in the lights, and darker in the ſhades.

The Seed is ſhaded with Biſtre.

The Green of both theſe laſt, muſt be Verditer, ſhaded with Iris.

SECT. XXV.

The SUN FLOWER.

Be covered with Maſticoat and Gamboge, and finiſh with Gall ſtone and Biſtre.

The green muſt be laid on with Verditer and Maſticoat; and ſhaded with Bladder-green.

SECT. XXVI.

The PASS ROSE.

Like the French Marigold, and the Green of the Leaves the ſame; but their Veins muſt be of a deeper Green.

SECT. XXVII.

The SCABIOUS.

There are two ſorts of the Scabious, Red and Purple. The Leaves of the firſt are Indian lake with a little White, and in the middle, where there is a large Pod or Bud which holds the ſeed, it is to be coloured and finiſhed with Lake only, but with the Addition of a little Ultramarine or Indigo to make it darker. Then make little longiſh ſpots of White for the upper Part, at a pretty good Diſtance from each other; but forget not to let them be ſtronger in the lights and weaker in the ſhades, and to make them true in all Directions.

For the others, be covered with a very pale Purple; as well on the Leaves, as on the Receptacle or Pod in the middle; ſhading both with the ſame Colour of a deeper Dye; and inſtead of uſing ſmall white ſtrokes for the ſeed, let them be Purple, and make a Round about each, and that, all over the Pod.

The

The Green; Verditer and Maſticoat, ſhaded with Iris Green.

SECT. XXVIII.

The GLADIOLA.

Lay on Columbin Lake, and White, very pale; then proceed and finiſh with Lake only, very bright in ſome Places, and very deep in others, ever adding thereto Biſtre for the ſtrongeſt ſhades.

The Green; Verditer, ſhaded with Iris.

SECT. XXIX.

The LIVER-WORT.

It is ſometimes Red, and ſometimes blue; for this laſt be covered all over with Ultramarine, White, and a little Carmine, or Lake; ſhade the inſide of the Leaves with this Mixture, but let it be deeper, except for the outermoſt; for which and the outſide of all, you muſt make an Addition of Indigo and White, that the Colour may be deadned.

For the Red; lay on Columbin Lake, and White, very pale; and finiſh with leſs White.

The Green; Verditer, Maſticoat, and a little Biſtre. Shade with Iris, and a little Biſtre, but chiefly for the outſide of the Leaves.

SECT. XXX.

The POME-GRANATE BLOSSOM.

For this, lay on Mine de Plomb, ſhade with Vermillion and Carmine, and finiſh with this laſt.

The Green; Verditer and Maſticoat, ſhade with Iris.

SECT. XXXI.

The Bloſſom of the INDIAN BEAN.

Lay on Indian Lake and White, ſhade the middle Leaves with Lake only; but thereto add a little Ultramarine for the reſt.

The Green, Verditer; ſhade with Iris.

SECT.

SECT. XXXII.

The LARK's-SPUR, or HEEL.

It is of ſeveral Colours, and ſtriped. The moſt common are Purple, Gridelin, and Red.

SECT. XXXIII.

VIOLETS and PAUNSIES or PANSIES.

The ſame may be ſaid of theſe, except that for theſe laſt, the two middle Leaves are bluer than the reſt, that is, towards the border, for the Inſide of theſe is yellow, with little black Strokes or Veins, which dye away towards the middle.

SECT. XXXIV.

The IMPERIAL LILY.

It is of two Colours, *viz.* Yellow, and Red, or Orange-Colour. For the firſt be coloured with Orpiment, and ſhade with Gall ſtone and a little Vermillion.

For the ſecond be covered with Orpiment and Vermillion, and ſhade with Gall ſtone and Vermillion, making the Beginning of the Leaves, next to the Stalk, of Lake and Biſtre, very deep, and for all, Veins of this Mixture along the Leaves.

The Green, Verditer and Maſticoat, ſhaded with Iris and Gamboge.

SECT. XXXV.

The GILLY-FLOWER.

There are many ſorts of Gilly-flowers, as White, Yellow, Purple, and ſtrip'd, ſtreak'd, or variegated with ſeveral Colours.

For the White; be covered with White, and ſhade with Black, and a little Indigo for the Heart of the Leaves.

For the Yellow; Maſticoat, Gamboge, and Gall-ſtone.

The Purple is done with Purple and White. You muſt finiſh with leſs White, minding to be brighter in the Heart, and even a little yellowiſh.

For the Red; Lake and White, and finiſh without white.

For the ſtriped or variegated, lay on white, and variegate ſometimes with a Purple, wherein Ultramarine predominates; or ſometimes with a Purple wherein Carmine prevails, or Lake; ſometimes with white, at other times without it, ſhading the reſt of the Leaves with Indigo.

The Seed of every one muſt be Verditer and Maſticoat finiſhed with Iris.

The Leaves and the Stalks, with the ſame Green, mixed with Iris, to ſhade with.

I ſhould never have done, were I here to dwell on all the Flowers that may be painted; but I have ſaid enough, and even too much, to inſtruct you fully in this branch of Painting; for ten or a dozen Examples had been ſufficient for any one who ſhould begin to copy Nature herſelf; for in this Caſe he has nothing to do but to imitate what he has before his Eyes. But I imagin'd it is more uſeful to copy after Prints; and that I ſhould undertake no ungrateful Taſk, did I dwell on the method of colouring and finiſhing a good Number of Flowers, at leaſt (to conclude as I began) every one may take or leave what he ſees proper.

SECT. XXXVI.

I ſhall not here ſubjoin any particular Inſtructions on an infinite Number of other Subjects; for it were to little or no purpoſe, and this little Work is already more diffuſe than I at firſt intended it. Therefore I only add in general, that Fruits, Fiſhes, Serpents, and all ſorts of Reptiles, muſt be touched after the manner of Figures, that is, hatched or ſtippled: But that Birds and all the other Animals muſt be finiſhed with ſtrokes after the manner of Flowers.

SECT.

SECT. XXXVII.

Take heed to uſe no White Lead for any of theſe things, for it is good for nothing but Oil, turning as black as Ink when tempered with Gum-water only, and eſpecially if you put up your Work in a damp place, or where Perfumes are. Inſtead thereof uſe Ceruſe of Venice, or Flake White, which is to the full as fine; fear not to uſe this, eſpecially for your firſt Colourings, but mix a Portion of it in all your compounds to give them a certain Body which ſtrengthens your Work, and makes it appear warm and mellow.

Painters, however, practiſe differently upon this Head; for ſome uſe but little of it, and others none at all; but the manner of theſe laſt is hard and dry. Others again uſe it in abundance, and theſe are certainly to be followed, as conforming to the moſt uſual Opinion of the moſt ſkilful Artiſts; for beſides that it is the moſt ready, you may thereby (a thing almoſt impoſſible to be done without it) copy all ſorts of Pictures, notwithſtanding the contrary Opinion of thoſe, who pretend that in Miniature you cannot come up to the Strength and the different Tints of Pieces in Oil; a miſtake, at leaſt with reference to good Painters, as is ſufficiently evinced from the Effects; for we ſee Figures, Landſcapes, Portraits, and every thing elſe in Miniature, touched in the grand manner with as much Truth, and as nobly, altho' more prettily and delicately than in Oil.

I know indeed this kind of Painting has its Advantages, were they only that it diſpatches more in leſs time, that it is more eaſily preſerved, and that it claims to be the eldeſt Siſter, and boaſts its Antiquity.

But notwithſtanding all this, it muſt be granted that Miniature has her Advantages alſo, and, without repeating what I have already ſaid, it is more neat and convenient; you may carry all your Apparatus in your Pocket; you may work where you pleaſe without ſo much Preparation; you may leave it and reſume it juſt when and as often as you pleaſe, which cannot well be practiſed with the firſt, in which you ought hardly ever to work dry.

But give me leave to ſay, that it is in both the one and the other as in Comedy; in which the greateſt or the leaſt Perfection of the Actors conſiſts not in acting the higher or lower Parts, but in acting, what they do act, extreamly well; for if he who acts the meaneſt Character acquits himſelf better therein than he who acts the Heroe of the Play, he will doubtleſs deſerve a greater meaſure of Applauſe.

And the ſame is it in the Art of Painting; for its Excellence is not confined to the Grandeur of one particular Subject, but to the manner of treating it: Have you a Talent for this, plunge not yourſelf raſhly into that; and if you have from Heaven received ſome Spark of the Divine Fire, know for what End it was beſtowed on you, nor deviate from the Path cut out for you. Some ſhall take the different Airs of Heads, others ſhall ſucceed better in Landſcapes; ſome ſhall work finely in ſmall, who could do little or nothing in great; and others are good Colouriſts, but bad Deſigners; and others, in ſhort, have a Hand for nothing but Flowers. To conclude, the *Baſſans* have rais'd to themſelves a Name for Animals, which they moſt excellently touched, and much better than any thing elſe.

Let every one therefore be contented with his Genius, nor preſume upon another's Ground, or attempt a Flight unequal to his Strength; it being in vain to ſtrive againſt Nature, and imprudent and immodeſt in us to aim at what does not belong to us, for we thereby uncover our own ſhame, and work our own diſgrace. On the other Hand, it is no diſhonour to you that you are not poſſeſs'd of all the great Talents which have ennobled all the great Painters, each of whom has had his Blemiſhes as well as Beauties; let us therefore, I again repeat it, ſit down quietly with the ſhare allotted to us, the great matter is to cultivate it with Care and Diligence.

And altho' this ſmall Tract may contribute to your Aſſiſtance, as it aſſuredly will, I preſent it to you as no other than a Supplement to more immediate Helps: Doubtleſs you will learn more effectually under the Direction of an able Maſter, from whom you may imbibe all the ſound Precepts and true Rules, and ſee all made

plain

plain to you by Practice. Now, altho' the Contrivances for Drawing, which in the beginning I gave you, be infallible; it were much better to have a Hand expert thereat without any such servile Helps; for if you are not actuated by a superior Genius to guide you, and if you have not a most accurate Eye, in vain will be all your Pains to adjust your pieces correctly, and it will be a mere Chance if after all they are not lame and spiritless; for in laying on the Colours, you easily lose the Strokes, and with far more Difficulty will you be able to re trace them, if you are quite aukward at Drawing. I do therefore most earnestly recommend it to all Lovers of Painting, that they apply themselves to draw learnedly, to copy with indefatigable Perseverance, and that this they always do most tenaciously from good Originals: In a Word, be satisfy'd to ascend regularly by those Steps which lead up to the Perfection of this fine Art, whose Precepts, as happens in all other Arts, are soon obtained; but this is not enough, you must execute also. Theory is of little worth without Practice, as Practice without Theory is a blind Guide, who leads us astray instead of conducting us in the right Road: But to know well what you would do, and to do well what you know, is the true Means of attaining your End, greatly to increase in Knowledge with Time, and to become the good Scholar of an excellent Master.

For my part, I boast not of being such; but however, I will venture to promise all those who shall be pleased to step into this my little School, with never so little a disposition and longing to learn, That they will have no Cause to repent themselves in their Trouble; for if they stay with Pleasure, I flatter my self they will not go out as they came in.

THE

THE

Secret of an *Italian*

FOR MAKING

Carmine and *Ultramarine.*

AN anonymous Painter, one who appears to have been a ſound and excellent Judge, expreſs himſelf to this Effect concerning this Arcanum, "Nothing is more ſafe or eaſier than this manner of "making theſe Colours; they have a Luſtre, a Vivacity not to be expreſſed, they never change, and may "be prepared at ſo eaſy a Rate, that for one Piſtole you "may make as much as would coſt you ſeven or eight "at *Florence*; but the Proof will confirm what I here "advance, much more effectually than all I can ſay."

Carmine.

Take a pound of Braſil-wood from *Fernambuco*, of the Golden-colour, and pounding it in a Mortar, ſteep it for three or four Days in a Bocal of White-Wine Vinegar; then boil it for half an Hour, and paſſing it through a cloſe Cloth, put it again over the Fire. In the mean time have another Veſſel or Pot at hand, in which ſhall be eight Ounces of Alom diluted in White-Wine Vinegar, which Dilution pour into the other Liquor, and ſtir it about with a Spatula: The Froth or Scum which will hereupon ariſe, will be your Carmine, collect it therefore and dry it. This may be done with Cochineal inſtead of Brazil wood.

Ultramarine.

Ultramarine.

Take ten Ounces of Linſeed Oil, and pour them into an Earthen-diſh, with ſeven or eight Drops of common Water, and ſet it upon the Fire, where let it remain till it begins to fry or boil, and then throw in a pound of white Virgin-wax, broken into ſmall Bits. When the Wax is melted, throw in a pound of Greek Pitch, and add thereto four Ounces of powder of Maſtick, which has been previouſly melted by it ſelf, together with two Ounces of Turpentine, and let the whole melt over the Fire for an Hour together. The Hour expired, pour this Compoſition into cold Water, and if it prove ſoft like Butter it is enough; but if you feel any hard Grains or Grit, conclude that your Maſtick is not ſufficiently melted, and clap it over the Fire again.

The whole being in due temper, put blue Lapis into a Crucible, and let it remain in the Fire till it be red hot like the Fire itſelf, and then throw it into White-Wine Vinegar, which it will abſorb till it burſt and break into ſmall Bits, which bray to a Powder, and then incorporate this powder with a little of the above Compoſition, but let it be as little as poſſible, and let it remain thus for about a Fortnight. After this lay a Board, a little inclined, upon the Edge of a Table, (it would be the more convenient if this Board had a Trench or Channel cut along it;) and under the Foot of this Board place a Glaſs Veſſel or Receiver, and put your blue Paſte at the Head of it, and above the ſame, place a Veſſel of Water, ſo that it may diſtil drop by drop upon the Paſte. All things being diſpoſed in this manner, help the Water to dilute the Paſte by ſtirring it very gently with the ſmall End of a ſmooth Stick. The firſt Blue which will come away drop by drop, will prove the fineſt; and when you perceive it to loſe of its Beauty, change the Recipient for another, to receive the ſecond Blue, after which you will have a third, which you may uſe very ſafely. Set theſe three ſorts of Ultramarine to dry, then collect them, and put them up ſeparately in Bags of White Leather.

OTHER

OTHER

SECRETS

FOR

Making Ultramarine after different Ways; Fine Lakes, and Colombine Lakes; Greens, and other Colours, after different Ways; particularly adapted to Miniature.

ULTRAMARINE.

TAKE half a Pound of Lapis Lazuli, and lay it upon burning Coals, where let it remain till it be red hot, and then quench it in very ſtrong Vinegar. Afterwards, grind it upon ſome hard Marble or Stone, with rectified Brandy; the more you grind it the finer will be your Ultramarine; and being ground to your mind, leave it upon the Marble, or put it into ſome Veſſel, while you prepare your Paſte or Paſtel, wherewith to incorporate your ſaid Lapis.

To make this paſte, take a quarter of a pound of yellow Wax, a quarter of a pound of Turpentine, as much Roſin, and as much Linſeed-oil; melt them all together over a ſlow Fire, and when they begin to bubble, they will be ſufficiently done. Pour this melted Compoſition into glazed Pans, and it will be your Ultramarine, Paſtel or Paſte, of which take a Quantity, equal to that of your

your Lapis, and knead them together upon your Marble, that is, your Lapis and Paſtel together, which being incorporated, leave them in that State for a Night. To force out the Ultramarine in the ſaid Paſtel, pour fair Water upon it, and knead it with your Hands, like ſo much Dough, and the Ultramarine will ſqueeze out and fall into a Pot, which muſt ſtand under your Hands to receive it; leave it then to ſettle in the ſaid Water, till you perceive the Ultramarine to be ſubſided.

Another Way.

Take four Ounces of Linſeed Oil, four Ounces of new Wax, four Ounces of Arganlon, one Ounce of Roſin, one Ounce of Maſtic in Tears, four Ounces of Burgundy-pitch, two Drams of Incenſe or Frankincenſe, and two Drams of Dragon's Blood; bruiſe each Ingredient, by it ſelf in a Mortar; then put your Linſeed-Oil in a pan over the Fire, and when it begins to fry, throw in your Ingredients one after the other, ſo that your Dragon's Blood be the laſt thrown in; in the mean time, continually ſtirring the others with a Stick or Spatula, and when the whole becomes glutinous and ſtringy between your Fingers, your paſte is fit for Uſe. Then throw in your Lapis Lazuli, having previouſly burnt it in a Coal-fire, quenched it in White Wine-Vinegar, ground it when dry upon a Marble, and paſs'd it through a very fine Sive, as has been before ſpecified; your Lapis thus prepared, and then incorporated with your paſte, leave it in that State for twenty-four Hours, and then force out your Ultramarine with Spring Water, but uſe no other, and knead well your paſte with this ſaid Water; you will then have the firſt Tincture or Degree of your Blue, which will be the fineſt and moſt lively of all; continue this to the third Repetition; and if after all, you throw the Remains into a proper chemical Veſſel, you may have the Gold with which your Lapis was impregnated.

Some there are who knead their paſte, at once, in a Veſſel of milk warm Water, into which they ſqueeze their Ultramarine, which they leave to ſettle for twenty-four Hours and more, when pouring off the Water by Inclination,

Inclination, they find the Ultramarine at bottom, and ſet it to dry in the Sun. Sometimes they leave the Lapis incorporated in the paſte for the ſpace of a Month, before they expreſs or ſqueeze out the Ultramarine, and in the ſaid paſte, inſtead of Linſeed Oil and Turpentine, ſubſtitute only Oil of Turpentine, and black Pitch inſtead of Burgundy-pitch; as for the Lapis itſelf, they heat it, quench it, grind it, and ſearce it, in the manner we have directed above.

Fine Lake.

Take a pound of good Brazil, which boil with three Quarts of Lye, made of the Aſhes of Vine-ſprigs, till it be half evaporated, then let it ſettle and ſtrain it off. Boil it over again with freſh Braſil, Cochineal, and Terra-merita; that is, only half a pound of Braſil, and half a quarter of a pound of Cochineal, with the further Addition of another Quart of fair Water, which muſt boil till it be alſo half evaporated as before, then left to ſettle, and then ſtrained. as for the Terra-merita, you need have but an Ounce of that. When you take this Liquid from the Fire, obſerve to throw into it an Ounce of burnt Alom, reduc'd to an impalpable powder, and diſſolve the ſame therein by ſtirring it with a Stick, and adding thereto half a Dram of Arſenic. Then to give it a Body take two Cuttle-fiſh Bones, pulverize them and throw them in; leave it to dry up at leiſure, and then grind it with a good Quantity of fair Water, in which leave it to ſteep; then ſtrain it thro' a Cloth, and make it up into ſmall Tablets or Cakes, which ſet to dry on a Card or Paſteboad. If you would have your Lake redder, add to it Lemon Juice; and if you would have it deeper, add to it Oil of Tartar.

Another Lake.

Take Shavings or Sheatings of Scarlet, and boil them in a Lye of the Aſhes of burnt Tartar or Oil of Tartar, which Lye has the property of ſeparating the Scarlet; when it has boiled ſufficiently take it off, and add to it Cochineal, Maſtick in powder, and a little Roch Alom; boil the whole over again, and while it is hot, ſtrain

it

it two or three times through a Jelly-Bag, the first time squeezing the Bag from top to bottom with two sticks; then take out what remains behind in the Bag and wash it well; pass the Liquor you express'd with the sticks thro' the Bag again, and you will have a paste sticking to the sides of the Bag, which you may spread out upon a Paste-board, or divide into small Parcels upon paper, and leave it to dry.

Columbine-lake.

Take three Quarts of the most subtily distill'd Vinegar, one pound of the finest Brasil-wood of *Fernambuco*, which rasp and set it to steep in the said Vinegar a Month at least, and if longer so much the better; then boil the Whole in *Balneo Mariæ*, three or four wabbles up, and leave it for a day or two; after which prepare a quarter part of Alom-powder, which put into a very clean Earthen-pan, and upon it strain your Liquor thro' a Cloth, and so let it remain for a Day; then heat the Whole till it simmers, and leaving it again for twenty-four hours, prepare two Cuttle-fish Bones into a powder, and thereupon pour your Liquor which must be a little warm; stir then the whole with a stick till it is cool, and leave it again for twenty-four hours before you strain it: Observe that you must previously strain it upon the Alom before you pour it upon the Cuttle-fish Bone.

The Marc or Dregs of Columbine-lake.

To make a fine purple Colour, besides the Carmine for Oil and for Distemper, take the Dregs or Marc of the Columbine lake which subsides with the Cuttle-fish Bone, and dry it and grind it; there is no fine Lake so splendid, and if you mix it with Lake you add to its body.

Iris Green.

Take of the blueſt Flower-de-luces, otherwise called Flag-Iris; strip off the upper or sattin part of them, and keep only that; the rest is good for naught, and throw away even all the little yellow Nervures, pound them in a Mortar what you thus pick, and being well pounded, throw upon it a little Water, three or four Spoonfuls,

more

more or leſs, according to your quantity of Flowers: Previous to this you muſt have diſſolved in this Water a little Alom and Gum-Arabic, but a very little, and then bray them well all together, and ſtrain the whole thro' a cloſe Cloth, and put this Juice into Shells which dry in the Air.

Another Way.

After you have pick'd the above-mentioned Flowers, pound them, and put to them a little Alom-water, as above directed; throw in a little powder of quick Lime, as if you was ſalting a Sallad; it has the property of changing the Colour and cleanſing it: In fine, expreſs the Juice into Shells.

Another Way.

Pound the ſame Flowers in a Mortar, expreſs the Juice into Shells, and ſalt the Juice in each Shell with Alom a little unequally; that you may thence have Greens of different ſhades.

Another Way ſtill better.

Pound Alom, and bruiſe *French* or *Avignon* Berries, mix them together with Water, and boil them either over a Fire or an Aſh-heat till the Water become very Yellow; then pound Flower-de-luces or the Flag-Iris in a Mortar, and pour thereto a little of this yellow Water, in proportion as you would have it a bright Green or a ſad Green; then ſtrain it thro' a Cloth of Goats Hair, for it would be the worſe for paſſing thro' Linen, and put the Juice ſo ſtrained or expreſs'd into large Shells, which expoſe to all the Heat of the Sun, for the Green will become mouldly or mothery in the ſhade, and prove too clammy.

Another Way.

Take Leaves of the Flag-Iris, mince them very ſmall, and put them into ſome Glaſs or Earthen Veſſel, or what would do better, in ſome Copper pot or pan with powdered Alom and quick Lime; leave them to putrify in this ſtate for ten or twelve Days; being rotten ſqueeze them into Shells. The Green is more lively and rich when you only bray the Leaves, and expreſs them at once

once without giving them time to rot, having previouſly ſalted them over with powdered Alom.

Another Way with the Flower of Violet.

The Green made of the Leaf of the *March* Violet is done by the ſame Method, but you muſt have a greater Quantity of it, and this is a deeper Green than that of the Iris. Obſerve that inſtead of Lime you may uſe *French* Berries bruiſed with Alom. It exceeds Lime for changing Blue into Green.

You may alſo make a Green with the Flowers of Panſies, after the ſame manner.

Bladder-Green.

Take the Fruit or Berry of the Plant or Bramble call'd Rhamnus, pound it in a Morter, and throw into it a little powdered Alom; then expreſs the Juice of it, and put it up in a Bladder, which tye cloſe and leave it to dry till your Green is hard.

French Pink.

It is commonly made with the White of Troye, otherwiſe call *Spaniſh* White, and *French* or *Avignon* Berries, but it is apt to change Colour; ſo that it will be ſafer to make it of white Lead or Ceruſe, which grind very fine and dilute it upon a Marble, whence take it up with a wooden Spatula, and leave it to dry in the ſhady part of any Room; then take French Berries, bruiſe them in a Marble Mortar with a wooden Peſtle, and boil them with Water in a leaded Earthen-pot, till a third or more be evaporated; ſtrain this Decoction thro' a Linnen cloth, and put into it the bigneſs of two or three ſmall Nuts of Alom to hinder it from changing colour; when it is diſſolved, dilute the White with this Decoction to the Conſiſtence of a pretty thick pap, or rather paſte, which work well between your Hands and make up into Trochiſks, which ſet to dry in an airy Room; when it is dry dilute it again two or three times with the ſaid Decoction according as you would have your Pink bright or deep, and leave it to dry each time till it be very dry. Obſerve that your Liquor or Decoction muſt be warm when you dilute your paſte therewith, and that you muſt make it

afreſh

afreſh when the firſt is tainted, taking heed never to touch it with Iron or Steel, but all along uſe a wooden Spatula.

How to make a right Uſe of Alom.

The beſt way of uſing Alom for Iris-Green, and the other Compoſitions of colours, which would change without this Mineral, is to break it ſmall and to put it into a little Water over a Fire, for otherwiſe it would never diſſolve; and with this Water ſprinkle over your Flowers on the Juice of your colours; but the leſs Alom the better, for it burns when it is uſed too freely.

How to purify Vermillion.

Cinnabar or Vermillion being a compound of Mercury and Sulphur, muſt be diveſted of the Impurities it contracts from thoſe Minerals, which Impurities darken its Luſtre, and cauſe it to change. Now this purification is thus ordered.

Grind the Cinnabar, in Stone, with fair Water upon a Marble or Porphyry; put it into a Glaſs or earthen Veſſel to dry, then put Urine to it and mix it, ſo that it be thoroughly wet and ſwim; Let it ſettle then, and the Cinnabar being precipitated or fallen, pour off the Urine by Inclination, and put freſh in the Room of it, leaving it ſo all Night, and repeating the ſame Change for four or five days till the Cinnabar be thoroughly purified. Continue your Proceſs with beating up the White of an Egg, which mixing with fair Water, pour it upon your Cinnabar, and ſtir the whole about with a Walnut tree-ſtick; change this Liquor two or three Times as above, and keep the Veſſel well ſtopped up or cloſely covered for fear of duſt, which would ſpoil your Cinnabar; and when you would uſe it, temper it with Gum-water; with this it will not change its colour.

Another Way.

Grind Cinnabar, previouſly pulverized, upon a Prophyry with the Urine of a child, or with Brandy, and dry it in the ſhade.

If you would entirely diveſt it of all its Obſcurity, and give it a brighter or redder countenance, infuſe in the Brandy either Urine or a little Saffron, and with this Liquor grind your Cinnabar.

A Memorandum,

For making a very fine poliſh'd Gold.

The Pieces of Wood you would gild, whether Frames, Borders, or ought elſe, muſt be very ſmooth; and to make them the more ſo, paſs Sea-dog's-ſkin over them. Then you muſt glue or ſize it with a ſtuff made of the cuttings of white Gloves, and lay on nine or ten layers of White when it is thoroughly dry. When it is perfectly dry uſe your Shave Graſs that it may be ſo much the kinder, and then warm ſome Size and Water, into which dip a fine piece of Linnen, which wring, and with it rub the White. Then lay on two or three layers of Gold-colour, and more if it be not of a good Body or deep enough; and when it is dry, rub it ſoundly with a dry Cloth till it be bright again. Then take of the ſtrongeſt Brandy you can find, and waſh the Gold-colour with this Brandy by the help of a pencil: but you muſt have your Leaf Gold cut and ready upon the Cuſhion to clap it on the Moment the pencil is gone over the part; and when it is dry, poliſh it with a Dog's Tooth.

To make Glove leather Size.

Take a pound of the cuttings of white Gloves, and let it ſteep in Water ſome time; then boil it in a Pot with twelve Quarts of Water, till it be reduced to two Quarts; then ſtrain it thro' a Cloth into a new Earthen-pan. To know if your Size is ſtrong enough, try when it is cooled, if it feels firm under your Hand.

To make the White.

The Size being done, take Crayon White, and ſcrape it with a Knife, or grind it upon a Marble; melt and heat your Size to a violent degree; then taking it from the Fire, throw in White enough to give it the conſiſtence of a pap, leave it to infuſe for a quarter of an Hour, then ſtir and mix it with a Hog's Hair Bruſh.

Take this White and add more Size to it, that it may be the thinner for the firſt and ſecond goings over.

Obſerve that your firſt Lay be dry before you cover it with the ſecond; if it be Wood you are upon, it will require a twelve-fold Repetition, but for Paſtboard ſix or ſeven will be enough.

This done, take Water, and into it dip a ſoft Bruſh and ſtrain it between your Hands or Fingers, and rub your Work over with it, to make it lye more even; as ſoon as your Bruſh is full of White, you muſt waſh it over again, and even change your Water, when it is too white.

You may ſometimes uſe a wet Cloath inſtead of a Bruſh.

Your Work being ſmooth and even, let it dry, and when it is dry, rub it over with ſhave Graſs, or a piece of new Cloth, to make it the kinder.

How to lay on a Ground to Gild and Silver upon, after a different manner.

Take a Quarter of a pound of fine Bole Armoniac well choſen, freſh, and greaſy to the Touch; ſteep it in Water to make it diſſolve, then grind it, adding thereto the Bigneſs of a Filberd of Crayon, and of a Pea of Tallow, which prepare thus:

Melt them, then throw them into freſh Water, and therein work them with you Hands to fit them for Uſe; the Size of a Peai s enough for one grinding.

In grinding you throw a little Soap-ſuds among the Bole. This compound being ground, put it into fair Water, which change from Time to Time to preſerve it.

When you would uſe it, temper it with warm'd Size, and if it prove as ſtrong as what you whitened with, put in a third of Water, and mix it with the Bole, which

which you ſhall make of the Thickneſs of a Cream; then lay it on your work with a pencil, and go over the whole with it three or four times, leaving it each time to dry before you go over it again; being finiſhed and dry, rub it with a ſoft Cloth, before you proceed to lay on your Gold or Silver.

When you uſe this Ground for Gold, you muſt add a little Red Lead to it.

How to lay on the Gold and Silver.

Set your piece ſlanting, and wet a part with a large pencil dipped in fair Water, then lay on the Gold, which muſt be ready cut upon a Leathern cuſhion, whence you may take it up with Cotton. The whole being gilt, leave it to dry, but neither in the Wind nor Sun, and being ſufficiently dry, burniſh it with a Dog's Tooth.

To know when it is in due temper, paſs the Dog's Tooth over it in ſome little places; and if it does not rub kindly, but peels off, it is not dry enough.

On the other Hand, take care that it be not too dry, for you will have ſo much the more Trouble in poliſhing it, and after all your pains, it will not be ſo bright as you may wiſh it. In great Heats three or four Hours drying is enough; but ſometimes it requires a Day and a Night.

To Matt Gold.

Make a Red with Red Lead, a little Vermillion and the White of an Egg well beaten up; grind the whole upon a Marble, and clap it into the deep or hallow Places with a fine Pencil.

To Matt Silver.

Take White of Ceruſe, grind it with Water, and then temper it with Ichthyocolla or Fiſh-Glue, or elſe Glove-ſize very fine; the firſt is moſt beautiful; you are to lay it with a Pencil upon the places you would Matt.

To make Shell-Gold and Shell-Silver.

Put Leaf-Gold upon a clean Marble, according to the Quantity you would have, and grind it with Honey juſt out of the Hive, or very pure, till it be extremely ſoft under your Hand; then throw it into a Glaſs of fair Water, and ſtir it, and change the Water till it be very clear or fine. Then pour it into about a Penny worth of Aquafortis, and there let it remain two Days; take out your Gold, and your Aquafortis may ſerve another time. The ſame may be done with Silver.

When you *would lay* on *either* the one or the other, temper it with one or two Drops of a very thin Gum-water, and to give it the ſmoother Face, let your Water be ſoap'd. It is proper alſo that you ſhould have a Waſh of Gall-ſtone under your Gold; it ſets it off much.

You muſt be very ſparing of your Gold and Silver when you work in Miniature, excepting the Borders round your Work; becauſe it favours too ſtrongly of the Golden Image of *Baal*.

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